

# Air Conditioning & Refrigeration News

The Newspaper of the Industry

Established 1926. Trade Mark Registered U. S. Patent Office.  
Member Audit Bureau of Circulations. Member Associated Business Papers.

Written to Be Read on Arrival

VOL. 27, No. 13, SERIAL No. 540  
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Business News Pub. Co.

DETROIT, MICHIGAN, JULY 26, 1939

Entered as second-class  
matter Aug. 1, 1927FOUR DOLLARS PER YEAR  
TWENTY CENTS PER COPY

## McNeal Makes Graphic Study Of Tax Burden

**Universal Cooler's Taxes Amount To One-Fourth Of Wage Expenditures**

DETROIT—A graphic picture of the burden which taxes are imposing upon American industry and the American workingmen (in terms of the additional wages the workingman might have received if the taxes hadn't been so great), is presented in a study of the relation of taxes to wages for four years of operation (1935 through 1938) of the Universal Cooler Corp., the study being made by F. S. McNeal, president of the firm.

Total taxes paid by Universal Cooler Corp. for the four years amounted to \$636,000, while total wages paid out during the same

### UNIVERSAL COOLER'S 1st QUARTER STATEMENT

DETROIT—Universal Cooler Corp., for the quarter ended June 30, 1939, reports a net profit of \$49,937.14 after provision for federal income taxes. This compares with a loss of \$30,474.56 for the same period of 1938.

For the nine months' period to June 30, the company reports a profit of \$64,770.53 after provision for federal income taxes, compared with a loss of \$189,540.92 for the same period of last year. The company's fiscal year ends Sept. 30.

period amounted to \$2,129,000. In other words, taxes totaled almost one-fourth as much as an expenditure by the company as wages.

Stated another way, the average yearly wage per employee for the firm's 386 employees during the four years amounted to \$1,382; while the average amount of taxes paid out per

### New Sunbeam Addition To Raise Production 50%

EVANSVILLE, Ind. — Sunbeam Electric Mfg. Co. has started construction of a new \$35,000 addition to its plant here which, it is said, will permit a 50% production increase on 1940 Coldsport refrigerators. The addition is to be completed by Sept. 1, with production of new models scheduled to start Nov. 1, according to Walter Stippler, factory manager.

The addition is designed to alleviate the present congested condition of the plant, caused primarily by arrangement of buildings. Efficiency in plant operation will be improved by the new addition.

The new section will be used for cabinet assembly. The company will also extend the porcelain division and connect it with the assembly plant.

### Rieckelman Opens Office As Manufacturer's Agent

BUFFALO — H. E. Rieckelman, who recently resigned as vice president of Fedders Mfg. Co. in charge of refrigeration and air-conditioning products, will represent the Wolverine Tube Co. in upper New York state in the capacity of a manufacturer's agent.

Mr. Rieckelman will also represent other lines which are sold to the refrigeration trade. He has established an office at 416 Jackson building in Buffalo.

## Promotions



R. C. COSGROVE



T. J. NEWCOMB

## Cosgrove, Newcomb Take New Posts

MANSFIELD, Ohio — R. C. Cosgrove, manager of the household refrigerator department of Westinghouse Electric & Mfg. Co., last week was promoted to be assistant sales manager of the merchandising division of the company. T. J. Newcomb, who has been head of the commercial refrigeration department, succeeds Mr. Cosgrove as manager of the household refrigerator department.

J. F. O'Donnell, now assistant sales manager, remains in his present capacity. Mr. Cosgrove's position being newly created.

Commercial refrigeration activities will be merged with the air-conditioning department, under the direction of P. Y. Danley, with headquarters at East Springfield.

(Concluded on Page 20, Column 2)

## Finance Companies Grant 'Exceptions' To 30-Months Time Payment Limit

### Have You Canvassed Summer Cottages?

KALAMAZOO, Mich. — Cottage owners at summer resorts have provided a good market for electric refrigerator rentals for Good Housekeeping Shop here, and over 50% of the rentals have turned into sales at the end of the vacation period.

The refrigerators rented are new 1937 and 1938 models, and offer the vacationers first-class electric refrigeration when they are away from home during the summer months. Rental charges are based on cubic foot capacity. For a 5-cu. ft. box the charge is \$5 a month, for a 6-cu. ft. model the charge is \$6, and 7-cu. ft. or larger models are rented at \$7.50 per month.

Rental contracts must be for at least three months, and free delivery is made only within a radius of 12 miles. Many summer renters have electric refrigerators in their homes, but have found that it is more convenient and cheaper to rent a box, rather than to move their own refrigerator and arrange and pay for cartage at the regular rates.

Although no down payment is required, \$5 must be paid in advance.

Those renters who have not before owned electric refrigerators, or who find superior features in the newer models rented, very often keep the refrigerators after the rental period. All money paid as rent is applied to the purchase price.

### Better Than Fly Paper

The general manager of H. G. Hill Co. at Nashville, Tenn., who has just authorized the installation of another Lipman air-conditioning system in one of the company's Super-Stores, advances some unusual reasons for the purchase.

One of these is that the air-conditioned store will experience much less trouble with flies. Modern heating eliminated the potbellied stove, with its attendant cracker barrel, and now air conditioning banishes the long curls of suspended fly paper so common in the oldtime general store.

A second reason given by the Hill manager for the purchase of air conditioning (case and cooler manufacturers please note) was that less trouble will be experienced with the "sweating" of refrigerated cases.

Two other reasons, which are well known to the industry, were said to be less personnel turnover and less loss of employees' time.

**'GO AHEAD & DRINK ALL THE ICE WATER YOU WANT'—A.M.A.**

CHICAGO—Ice water, taken in average quantities, is not harmful to the human system, according to a report published recently in the Journal of the American Medical Association.

"There is no reliable evidence," the report states, "that 'ice water' (water from 37 to 50° F.) causes chronic injury to the alimentary tract. Taken in large quantities with meals, it probably, through cooling, slows down gastric digestion for a few minutes. But this is probably of little significance.

"Taken in large quantities (three to four glasses) and rapidly, water near the temperature of ice may induce, in addition to a painful cold sensation, a temporary spasm of the pharynx and esophagus, as well as of the stomach, or even acute dilatation of the stomach in some people, especially when the temperature of the body is above normal, and as a consequence reflex excitability is somewhat increased.

"Most people," the report continues, "are conditioned to drink water so much cooler than the normal human body that a pleasant sensation is produced by the drinking of cold water. It acts as a counter-irritant, obscuring the sensation of thirst, and hence tends to produce the impression that the real thirst is stopped almost at once with cold water but not with tepid or warm water.

"Temperature of ingested water is primarily a matter of habit and convenience, not a matter of health, and has no relation to the person's occupation," the report concludes.

### Wisconsin Merchants To Police Loss Leader Law

WAUSAU, Wis.—A fair trade council to police the Wisconsin loss leader law has been organized here by local merchants.

Representing furniture dealers, hardware dealers, and department stores on the new council are Jacob Mirman, John Carlson, and Cassius Winkelman, respectively. All three of these groups handle appliances.

The council has named a grievance committee, whose business it is to investigate and report complaints of alleged violations to the council. The law provides that wholesalers must have a 2% markup and retailers a 6% markup.

### Policy Maintained For Nearly 2 Years Is Being Altered

CHICAGO—After a period of nearly two years in which the finance companies adhered rather rigidly to schedules which set 30 months as the top time payment period on household refrigerators, it appears that the "lid is off" for an extension of payments to a 36 months' period, at least, as finance companies have announced plans allowing payments to go beyond 30 months.

In September, 1937 the principal national finance companies issued schedules of terms for electric refrigerators which conformed with a schedule "suggested" in a bulletin issued by the National Association of Sales Finance Companies.

This schedule, on individual sales of household refrigerators and other major appliances, called for a minimum down payment of 10% or \$5, whichever was the greater, with 30 months as the maximum time payment period. The terms stipulated in this agreement have been generally adhered to until just recently.

First formal announcement of a change in the length of time allowable for refrigerator payments seems to have come in a bulletin issued by the refrigerator department of Westinghouse Electric & Mfg. Co. Under the heading "30-36 Months to Pay

(Concluded on Page 11, Column 1)

## Unions Stack Cards Against Hold-Outs

MILWAUKEE—A settlement was reached July 20 in the labor dispute between the Morley-Murphy Co., electrical appliance distributor, and the Household Furniture & Appliances Sales & Service Men's Union, Local No. 1343, the Electrical Workers' Union B1092 of Milwaukee, and the International Brotherhood of Electrical Workers, and the Chauffeurs, Teamsters, and Helpers "General" Local No. 200 of the I.B. of T.C.S. & H. of A.

Under terms of the settlement, members of the salesmen's and service men's union will receive \$2 a month more wages than non-union workers to cover the cost of their union dues. In addition, \$3 will be deducted from the first regular check of non-union employees, to be held in reserve by the company.

If the employee then chooses to join the union, the company will return the \$3 to cover his initiation fee into the union. Officials of the company said the \$3 would be returned to the worker if he left the firm's employ without joining the union.

Other terms of settlement include immediate withdrawal of pickets, agreement by the company to drop its charges of unfair labor practices by the union, wage increases, seniority rights, arbitration of any future disputes, continuance of vacations

(Concluded on Page 3, Column 1)

### Ohlheiser To Manage Larkin N. Y. Operation

ATLANTA—Carlton E. Ohlheiser last week assumed the position of general manager of the New York factory of Larkin Coils, Inc., manufacturer of refrigeration coils and instantaneous water coolers. Appointment of Mr. Ohlheiser is a step in a move towards expansion of production and sales activity from the New York plant, declared officials at Larkin's home office here.

Mr. Ohlheiser had formerly been connected with Fedders Mfg. Co., for

(Concluded on Page 3, Column 1)

## If You Aren't Getting Rich on Appliances, You Might . . .

By James McCallum

DETROIT—It's generally accepted that there's some element of gambling in the operation of any appliance distributorship, but recently a Detroit organization reversed that proposition and injected an element of appliance merchandising into the operation of a gambling establishment.

First information concerning this unique tie-up leaked out when Lieut. John P. McCarthy, head of the Detroit Police Department's Racket Squad, raided the establishment, which is located on Michigan Ave. near Junction Ave.

When questioned by a NEWS reporter, the good lieutenant attempted to "pooh-pooh" the story by saying, "There's really nothing to it, nothing to it at all." He finally declared, however, that both the handbook and the appliance operation had been

closed, admitting that "there might have been some connection between the two."

Curious as to what such an outfit might look like, the NEWS reporter decided to investigate. Not greatly to his surprise he found the handbook, and the "appliance distributorship" which was serving as its front, wide open.

In the small show window was one electric refrigerator, one washing machine, and one gas range. There was also a hand-painted sign reading "Distributor." No company name of any kind was in evidence.

On the pretense of gathering information for the paper, the reporter walked into the queerest "appliance distributor's display room" that he had ever seen. Not one appliance was in evidence. Only thing suggesting such a business was a couple of posters on the wall.

Over at one side of the rear wall was a very solid-looking door apparently leading into the rear portion of the building. Seated in the other rear corner of the room at a desk neatly fenced off by a heavy iron-pipe railing was a dour-looking soul who eyed the reporter suspiciously.

Asked a few leading questions about his "appliance" business, this man proved very non-communicative, stymieing the reporter insistently by repeating "I can't tell you a thing. I really can't give you any information at all. We just wholesale appliances." Even his name or the name of the company was not forthcoming.

Seeing that he was getting nowhere at all, and getting there rather rapidly, in his attempts to pump this gentleman, the reporter retreated to a vantage point beside the street door where he could hear and see without

(Concluded on Page 11, Column 3)



## Profitable Sales Ideas

### 'Fixer-Upper' Following Up Sales Keeps Users Happy, Prospect List Replenished

By Robert M. Price

SAN ANTONIO, Tex.—Employing one man as a "goodwill" salesman to follow up appliance sales and to make sure that the customer has complete satisfaction, King Furniture Co., General Electric dealer, has minimized complaints and added sales from sales.

This "fixer-upper," one of the three outside salesmen of the store, smooths out little details of operation and gains prospects from customers. He also is useful in following up prospects that have somehow slipped through one of the other salesmen.

This man was chosen because he was a "very special type of man," according to Charles Lorenz, who manages the appliance department of the store. He must have tact in making things right; he must have a smooth persuasiveness to make sales where others fail. Most important function he has, however, is to keep customer relations at their best, and to add customers who might otherwise go elsewhere.

Mr. Lorenz stresses the point of store goodwill. The store's "trade-mark"—"The Friendly House" carries out this idea. Important link in this policy chain is the service department. A four-man service crew is trained for speed and efficiency. One man is kept on the outside,

checking back to the store for assignments. The store has a "plumbing shop on wheels" that aids in making service calls a one-stop affair.

Each morning the service department checks up on all refrigerators to make sure that all are in perfect condition. This is particularly important on used models, for the store sells trade-ins on the profit angle.

Many dealers lose money on trade-ins because the customer often gives a better sales talk on the used model than the salesman gives on the new refrigerator, says Mr. Lorenz.

To halt such losses, Mr. Lorenz sends a service man out to appraise any refrigerator offered in trade. Knowing the mechanical worth of the box, the service man brings back a full report. The salesman, armed with this information, is given instructions to start with a certain offer—and end with another. The rule is strict. The trade-in boxes are then brought back when the deal is closed, reconditioned, and displayed in the store for quick resale.

All financing is done by the store itself, and terms are adjustable to fit the customer.

The store's six inside salesmen sell all the merchandise in the store. On appliance items they receive 6%. Training periods on selling are held regularly.

### To Dealers & Sales Supervisors In Need of Ideas

If the hot weather is making it tough to think up some fresh plans and sales methods to keep your sales force in high gear, you'll find on this page some ready-made and tested ideas for your consideration.

Moving men and milkmen can often give tips on "hot" prospects, a Connecticut dealer finds . . . to get consistent effort out of salesmen a Kansas dealer holds up bonuses unless sales keep at a high level . . . a Texas dealer gets repeat business by having a man especially designated to follow every sale . . . a southwestern attic fan dealer saves time and money by using a phone plan to contact prospects.

The "Profitable Sales Ideas" and "Specialty Selling Methods" pages of the NEWS each week deserve every dealer's close attention.

### Moving Men, Milkmen Are Prospect Sources

HARTFORD, Conn.—If your first prospect-getting method goes a bit stale, mix up your methods until you find one that works. Apparently this is the method followed at J. L. Roche Appliance Co., Westinghouse dealership—for more styles of approaches are used than there are salesmen.

One favorite prospect-getting idea used successfully by Roche salesmen is keeping in touch with the town's moving companies. Moving men know when people are moving, and where they're moving to—and, usually, they can remember what major appliances the families own.

Offering these men gifts for their homes, or cash, keeps worth-while tips moving in. The same plan can be used with milkmen . . . for most people like to keep on with the same line of dairy products when they move to another part of the city—so they tell their milkman where they'll be.

### Identifying Appliances Basis of Contest

FAIRMONT, W. Va.—To stimulate increased interest in major appliances among its customers, Monongahela West Penn Public Service Co. recently sponsored, through the medium of its monthly consumer publication, a combination puzzle-essay contest with various types of appliances as prizes.

Problem in the contest was to correctly identify all of the appliances in an all-electric kitchen which was pictured in a recent issue of the publication. Then contestants had to write a 25-word statement on "what appliance I like best, and why."

Prizes offered were: first, a Hot-point electric range; second, a Westinghouse toaster; third, a Hamilton-Beach mixer; fourth, an I.E.S. floor lamp; fifth, an Emerson radio; sixth, a Telechron clock. Fifty other prizes of 100-watt lamp bulbs also were awarded.

### Bonus Plan Pays Out Only If Sales Stay Up

TOPEKA, Kan.—To rid his staff of "six-day wonders"—appliance salesmen who mow 'em down one week and lay down themselves the next—Cliff Dodge, manager of Dodge-Van Es appliance dealership, has worked out a bonus schedule on weekly sales which is payable only if those of the week following gross \$150 or higher.

The bonus, which is payable at the end of the second week in addition to regular commissions, calls for \$2.50, or 1%, on sales of \$250; 2%, or \$8, on \$400, and 3%, or \$15, on \$500 or more.

### Society Columns & Construction Lists Provide Names For Telephone Canvass Plan on Attic Fans

DALLAS, Tex.—The society columns of Dallas newspapers, construction lists, and "old customer" records combine to provide Electric Household Appliance Co. with an abundance of solid prospects for room coolers and attic ventilating equipment, reports W. P. Maddox, contact manager.

List of potential prospects, gleaned from these sources, first are turned over to a girl, who works exclusively by telephone. Direct-mail materials also go to each person on the list.

In a telephone canvass, the girl seeks to ascertain whether the prospect is interested in an installation, or in learning more details about the company's equipment. Written reports of these calls are turned over to Mr. Maddox, who studies them and compiles an active list of "live" prospects for personal follow-up by salesmen.

In each instance, the young woman seeks to arrange for an interview. If efforts disclose that the prospect is not interested, and is not likely to change, the name goes off the list.

To furnish added incentive to this girl in her efforts, she is paid a commission of 2% in addition to her fixed monthly salary, in instances where her "missionary" work leads to sales.

When interest in equipment has been established, and interview arranged, Mr. Maddox visits the prospect's home, in company with the salesman, and there provides data for an accurate estimate of costs. From this data a written and complete estimate is made on a simple form provided for the purpose.

Thus, the whole picture of the cost and what it represents down to the last detail is placed before the eyes of the prospect. "This has been highly effective in completing the sale," declares Mr. Maddox, "since there is provision made on the form for signature of the prospect if and when the plan has his approval. It obviously is much easier for the man to sign his name to a form when it is there and ready; also, when it shows him in all details just what he is buying, with total cost broken into its component parts."

Last year 131 units were sold. This year, each buyer is being contacted by telephone and asked if, after a year of use of the equipment, the owner would not like to have a man visit his home and service the

equipment, free of charge. Usually, most buyers are highly pleased at offer of this free service.

"In reality," explains Mr. Maddox, "this is merely a means to enter into the users' homes, and affords opportunity to seek names of potential prospects. As a rule we can depend on not less than 30 minutes in which to accomplish this end."

"In the course of the 'servicing' the representative suggests that the owner probably has had visiting friends who have remarked on the comforts which the system makes in the home. In this manner, the goodwill already having been achieved through the free service device, a number of highly productive names are secured."

At the time Mr. Maddox was interviewed, 25% of customers who bought last year had responded to the suggestion of a service visit, and from each visit, he believes two sales have resulted.

So effective have these various methods proved that the store has been unable to keep equipment on the floor for display purposes. "We simply haven't been able to get it in faster than sales are made," declares Mr. Maddox, who sums up his methods briefly as follows:

1. "We 'work' every source for prospects—the society columns, the building list, the contractor's publication, the contractors, the architects, and the users of our equipment."
  2. "We systematically seek to build for an appointment. We waste no further time when it is evident interest is not going to be present."
  3. "We furnish our lists with attractive direct mail descriptive material."
  4. "We make it as easy as possible for the interested prospect to understand what he is buying and exactly why and what its cost will be."
  5. "We make it as easy as we can for him to sit down, discuss his problems—and sign his name to the agreement."
  6. "We offer our knowledge and time to service equipment in homes where it has been in use."
- Mr. Maddox has his sales staff divided into two units, one of which spends its time exclusively working in quest of sales of conditioner equipment, while the other is occupied wholly with household appliances.



### MEET DOC ICE-X He's a Specialist!

• This is DOC ICE-X, Ansul's new specialist in eliminating ice from expansion valves and capillary tubes. Doc gets there quick! And in machines charged with methyl chloride, methylene chloride, or any of the "Freon" refrigerants Doc provides immediate relief. Prevent any "ice illness" in your family . . . call on DOC ICE-X now!

• ANSUL ICE-X dissolves ice and prevents ice formation. Non-corrosive, it contains no methyl or ethyl alcohol, no alkali, acid or other corrosives. It leaves no residue, does not react with refrigerants or oils. It may be used with acrolein methyl chloride.

• Ansul ICE-X is machine-tested, easy to use, free of any hazard to life or health.

ANSUL CHEMICAL COMPANY  
MARINETTE WISCONSIN CA-3-9

# ANSUL ICE-X

THE ANSUL JOBBER NEAR YOU CAN SUPPLY YOU WITH ICE-X

### The Completeness of the CURTIS Line Assures the Correct Equipment for Every Air Conditioning or Refrigeration Need

WHETHER you buy, sell, install or specify air conditioning or refrigeration equipment, there's a Curtis unit that fulfills every requirement. Curtis covers a wide range of markets—makes possible greater sales. And you can specify Curtis products with absolute confidence.

The Curtis Store and Office Cooler fulfills the air conditioning demands of all classes of retail establishments. It's a complete, factory designed, packaged air conditioning unit. It mechanically cools, dehumidifies, circulates and filters the air—is quickly and easily installed with only water and electrical connections needed—adaptable for heating, too. It is offered in 3 and 5 ton sizes.

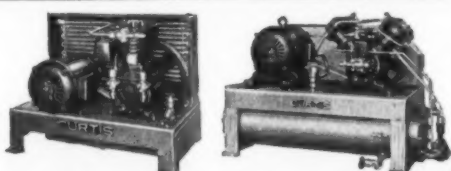
The Curtis Line of Condensing Units includes sizes from 1-6 H. P. to 30 tons air and water cooled—also unit coolers, coils, evaporative condensers, etc. Every Curtis product is precision engineered to deliver economical, efficient, care-free performance throughout an exceptionally long life.

### Curtis Refrigerating Machine Company

Division of  
Curtis Manufacturing Co.  
1912 Kienlen Avenue,  
St. Louis, Mo.



"Builders of Condensing Units Since 1926"



48 Air Cooled Units—45 Water Cooled Units  
—1/2 to 30 H.P.



A typical installation of the Curtis Store and Office Cooler in a New Orleans office.

## PEERLESS FLOOR TYPE PRODUCT COOLER

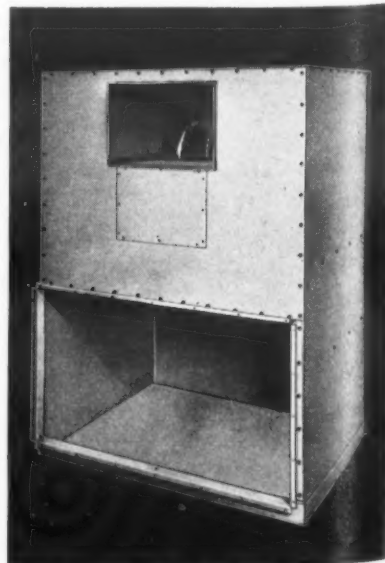
Capacities from 12,000 to 120,000 B.T.U. per hour for all types of storage above or below 32°F.

"Thermek equipped"  
All refrigerants

FOUR FACTORIES AND OVER 100 JOBBERS TO SERVE YOU ON PEERLESS PRODUCTS.

### PEERLESS OF AMERICA, INC.

MIDWEST FACTORY, GENERAL OFFICES—515 W. 35TH STREET, CHICAGO  
NEW YORK FACTORY 43-20 34TH STREET LONG ISLAND CITY  
PACIFIC COAST FACTORY 3000 SOUTH MAIN STREET LOS ANGELES, CALIF.  
SOUTHWEST FACTORY 2218 N. HARWOOD ST. DALLAS, TEXAS  
EXPORT DIVISION P. O. BOX 838 DETROIT, MICH.





## Georgia To New York



CARLTON OHLHEISER

Ohlheiser Is Manager  
For Larkin in N. Y.

(Concluded from Page 1, Column 5) the last four years in the southeastern branch of the firm, and for three years before that in the Fedders engineering laboratory at the plant in Buffalo.

Mr. Ohlheiser is a graduate of the University of Michigan in electrical engineering. Before going to the university he had worked for a number of years in the wholesale electrical business.

Distributor and Union  
Reach Agreement

(Concluded from Page 1, Column 5) with pay, dismissal of workers hired during the dispute.

In addition, the unions will inform by letter all persons it has contacted that the dispute has been amicably adjusted.

Separate agreements were reached by the company and the other two unions, members of which are not regularly employed by the firm but do contract work for it. They were charged in the company's complaint to the board with assisting the service men's group to carry on a boycott against the firm.

The negotiations were encouraged by the new state employment relations board, which held in abeyance a hearing on the company's claim the unions had violated the state labor law. Board members participated in the conferences leading to an amicable settlement.

Those who took part in contract negotiations for the union were I. E. Goldberg, counsel for the unions; Herman J. Burbach, business agent of the service and salesmen's union; Arthur Lemke, business agent for the truck drivers; and Milton Peters, business agent for the electricians.

The company was represented by C. L. Weaver, credit and office manager; C. E. Willert, manager; and Leo Nohl, attorney. Mr. Weaver said the company will continue its policy of distributing year-end bonuses when business conditions warrant it.

The strike was called at the firm June 27 and had been in progress until the date of the settlement.

Boucheron and Garceau  
Join Farnsworth

FORT WAYNE, Ind. — Pierre Boucheron, formerly general merchandising manager of Remington Arms Co., Inc., has been appointed general sales manager of Farnsworth Television & Radio Corp.

John S. Garceau, formerly advertising and sales promotion manager of Crosley Corp. and Fairbanks-Morse Home Appliances division, has joined the Farnsworth organization in a similar capacity.

Wisconsin Town Wars  
On False 'Closeouts'

MANITOWOC, Wis.—The common council here July 17 passed an ordinance which provides closing out sales conducted in the city may dispose only of the merchandise in the store at the time the sale opens.

Complaints had been made by local merchants that some of these sales in the past had served as an excuse for stores to bring in additional merchandise which is sold during the progress of the close-out.

June Washer Shipments  
Up 53% Over '38;  
Ironers Also Gain

CHICAGO—Washer shipments in June amounted to 120,076 units to climb ahead of the May total of 105,266, and show a 53.26% increase over the 78,354 units shipped in June, 1938, American Washer & Ironer Manufacturers Association figures reveal.

It was the eighth consecutive month to show an increase over the corresponding month of last year, and biggest month-against-month increase since June, 1936. Washer shipments for the first six months of this year totaled 734,060 units, as compared with 535,129 for the same period last year, an increase of 31.17%.

Ironer shipments in June totaled 7,216, as against 7,046 last year, while ironer shipments for the first six months were 52,527, compared with 51,349 in the same period last year.

New Orleans Dealership  
Opened By Vorbush

NEW ORLEANS—Benny Vorbush, for several years employed as engineer for a large industrial firm here, has opened a refrigeration and air-conditioning dealership on Dauphine St.

Stewart-Warner Suing  
Grunow For Back Rent

CHICAGO—A judgment by ex-parte against General Household Utilities Co. in favor of Stewart-Warner Corp. for \$65,571 has been vacated on motion of the defendant, and the cause was reinstated so it is now to be regarded as a suit action.

Stewart-Warner sued for rent from Dec. 1, 1937 to June 21, 1939 and possession of the premises at 2638 N. Pulaski Road.

Dry-Kold Creditors To  
Wind Up With 40%

NILES, Mich.—An additional dividend of 10%, or 40% of total claims, is probably all that can be expected by creditors of the Dry-Kold Refrigerator Co., now in the process of liquidation, according to Robert J. Wilson, attorney for the concern.

Reports Mr. Wilson: "The Dry-Kold Refrigerator Co. is at the stage in the liquidation where it is rather difficult to determine when another dividend will be paid. However, I believe that another 5% dividend should be paid by the end of September. It is also rather difficult to advise you definitely as to how many more dividends will be paid. However, as far as I can determine, the liquidation should pay approximately 10% more, which will make 40% on claims."

Washer-Ironer Display  
Contest Offers \$1,565  
In Prizes For Dealers

CHICAGO—Prizes totaling \$1,565 will be awarded in the window display contest for dealers and utilities during "National Washer-Ironer Week," Oct. 14 to 21, to be sponsored by the National Washer & Ironer Manufacturers Association.

The contests will be in three divisions, and awards ranging from \$25 to \$200 will be awarded for the window displays best typifying the advantages of washers and ironers in the home.

Additional cash prizes will also be given to factory or distributor salesmen first filing the entry of the winning dealer or utility, it is reported.

Department stores and utilities will be in the first class, with appliance and hardware stores in the second class. Furniture stores are in the third class. In each class the first prize will be \$200; second prize, \$100; third prize, \$50; and four prizes of \$25 each.

Prizes for nominating salesmen will be \$100 for first, \$50 for second, \$25 for third, and four prizes of \$10 each.

Judges of the contest are Eloise Davidson, New York Herald Tribune; Katherine Fisher, Good Housekeeping; and Ada Besse Swann, Woman's Home Companion.

Delavan Co. Names Dutch  
Cooling Sales Engineer

DES MOINES, Iowa—Paul R. Dutch, a recent graduate of Iowa State College in mechanical engineering, has joined the sales engineers' staff of Delavan Engineering Co., manufacturers' engineering sales representative here.

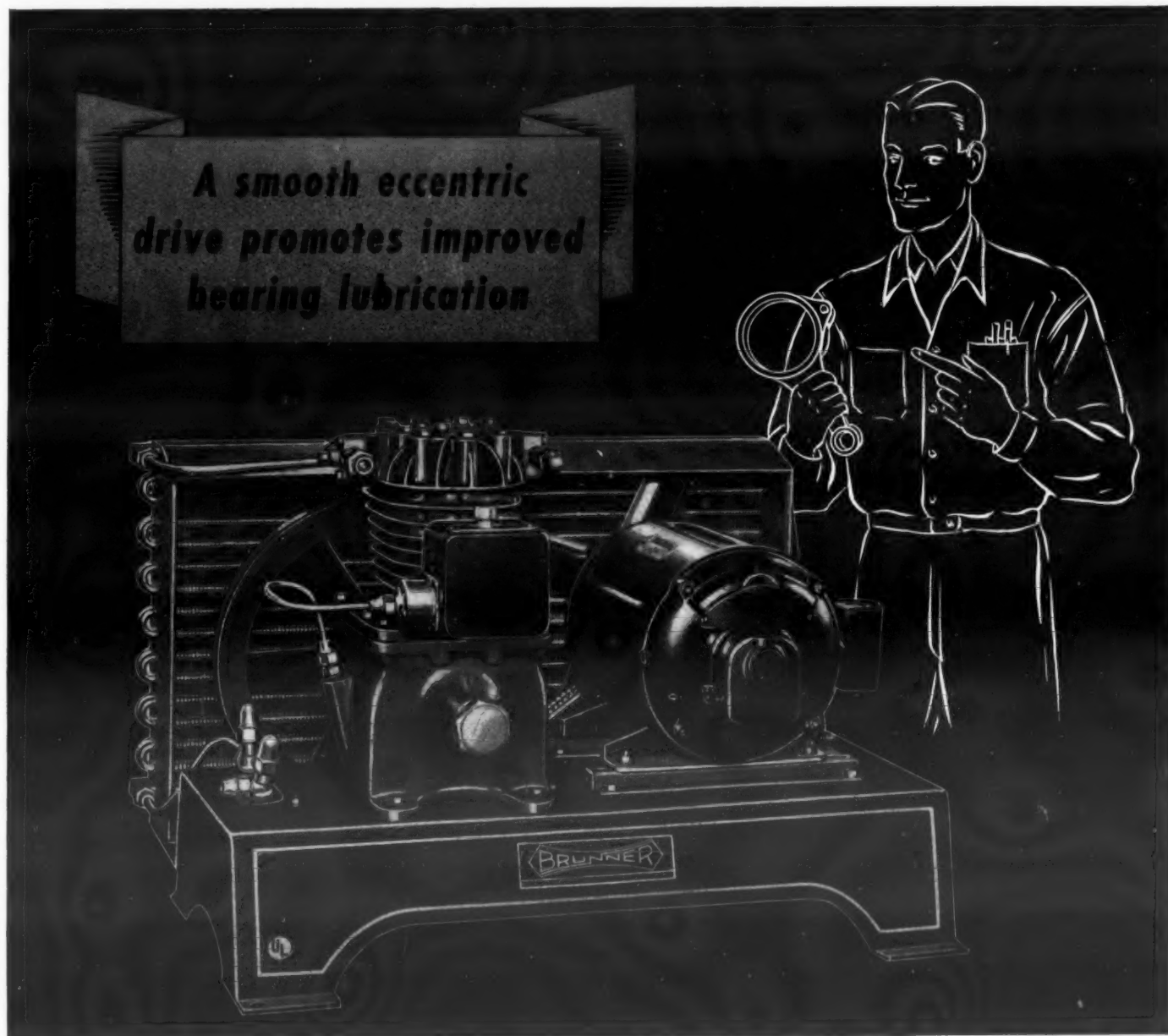
The company recently has been appointed exclusive representative for B. F. Sturtevant Co. in most of Iowa. Other manufacturers of air-handling equipment represented by the company include DeBothezat ventilating division of American Machine & Metals, Inc.; Allen Corp.; and Elgo Shutter & Mfg. Co.

Mr. Dutch will contact architects, engineers, contractors, industrials, and utilities, specializing on these lines.

Roy Nelson Joins Square D  
Regulator Division

DETROIT—Roy Nelson has joined the regulator division of Square D Co. to cooperate with George H. Clark in the further development of a line of refrigeration products.

Mr. Nelson has had extensive experience in all phases of refrigeration since 1921, having been associated with Kelvinator, Rice Products, Fedders, Norge, and other companies in the industry.



Every Brunner Unit is tested for Underwriters' Laboratories Approval and Carries the U. L. Seal

Silence—that perhaps is the most noticeable feature of the Brunner eccentric drive. For here is a design which takes the noise out of commercial refrigeration, reduces it to a gentle purr. But along with this smoothness of operation comes another important advantage, *improved lubrication*. The eccentric drive efficiently moves the lubricating oil to the bearings, because the straps are always submerged in crankcase oil. There is no excessive agitation of the oil, and the oil does not leave the

case. Naturally, there is less oil traveling around the system—it's in the crankcase where it belongs... Why not take advantage of design superiorities like these—superiorities which extend throughout the Brunner construction and spell long-term dependability? A technically trained factory representative will explain the Brunner equipment best suited to your requirements. Refrigerating and air conditioning units, air and water cooled, from ¼ to 15 H.P. Brunner Manufacturing Co., Utica, N.Y., U.S.A.

The Symbol of **BRUNNER** Dependability



# Frozen Foods Offer New Wedge For Refrigerator Sales Drives In the Winter

## Stewart-Warner Food Store Tie-In Plan To Get Big Trial In Fall

By F. M. Cockrell

CHICAGO—After years of experiments with all sorts of special merchandising and financing plans—many of them extremely ingenious—the household electric refrigeration industry has resigned itself to the belief that refrigerators can't be sold in winter.

People used to buy ice boxes in the spring, and not even the advent of the vastly different electric refrigerator served to change this well-established buying habit. Peak sales of household refrigerators have always come in the spring and then tapered off to a very low point in midwinter.

But John Ditzell, Stewart-Warner's analytical appliance sales manager, has hit upon a new idea which may well serve to revive the hope that refrigerators can be sold in winter time. Mr. Ditzell is tying up the sale of Stewart-Warner "Dual-Temp" refrigerators with the merchandising of frozen foods.

Selected food stores which sell quick-frozen foods are now also displaying a Stewart-Warner two-temperature household refrigerator, in which the low-temperature compartment is filled with frozen foods.

A refrigerator salesman from the

local dealership is assigned to the refrigerator, and is trained to tell both the story of frozen foods and the low-temperature compartment which will keep them properly. Samples of frozen foods are given to interested customers.

Dramatic selling point of quick-frozen foods is that they make available in the dead of winter fruits, vegetables, and other foods that were formerly obtainable—outside of canned goods—only in the summer.

Of course, quick-frozen foods are a year-around proposition, but the feature which is quickest to catch consumer attention is the winter availability of summer garden products.

So, at a time when quick-frozen foods have the highest appeal to consumers, Mr. Ditzell reasons that low-temperature refrigerators can also be sold.

It should be noted that ice boxes cannot hold zero temperatures, which are required for keeping quick-frozen foods. Nor can the ordinary electric refrigerator which is not equipped with a low-temperature compartment.

Hence those families which become sold on the idea of using quick-frozen foods must make new provisions for keeping them. These "new provisions" entail the purchase of a two-temperature electric refrigerator with a roomy compartment which will maintain a temperature close to zero.

Thus new vistas open up for the sale of replacement refrigerators. If the quick-frozen foods theme is taken up by refrigerator merchandisers, and if it continues to gain momentum, it will no longer be necessary to wait for an electric refrigerator to wear out or become wheezy before there is hope of replacing it.

The use of quick-frozen foods in a home obsoletes the kind of refrigeration that home has had in the past. Nor is any kind of ice box in the running at all, for they simply cannot supply the low temperatures required.

This new sales opportunity is particularly encouraging at the present time when the high saturation of the wired-home market is becoming a matter of concern to manufacturers. Frozen food offers the possibility of completely revising the estimates of future sales.

Refrigerator salesmen, working in conjunction with grocers, can point out that the high and uniformly dependable quality of quick-frozen foods enable housewives to make quantity purchases on an altogether new scale.

Almost every variety of meat, fish, fowl, fruit, and vegetable is now available quick-frozen. Supplies of these carefully selected foods can be

## A List of the Most Active Producers of Frozen Foods

C. V. Hill and Company, Inc.  
Trenton, New Jersey

### Publisher:

We appreciate very much the fairness shown by you in publishing our comments on the articles pertaining to frosted food equipment, published in recent issues of the AIR CONDITIONING AND REFRIGERATION NEWS. A review of all sides of matters such as this kind, is sure to be helpful to the industry as a whole. We assure you that we appreciate your cooperation very much.

We have in our files a very large list of packers, brokers, and distributors who are interested in frosted foods to some extent. Following are some of the principal companies, which may be of interest to you and you may already be familiar with some of them.

Fairmont Creamery Co., Omaha, Neb.

Twentieth Century Frosted Food Corp., 335 North Medina St., San Antonio, Texas.

Texas Sea Foods, Inc., National Standard Building, Houston, Texas.

Olney & Carpenter, Inc., Wolcott, N. Y.

Pratt's Fresh Frozen Foods, Inc., 513 West 16th Street, New York City (Mr. W. Pratt Thomas).

Honor Brand Frosted Foods Corp., c/o Stokely Bros., Indianapolis, Ind.

M. Feigenbaum & Sons, 8-9 Diamond Square, Pittsburgh. (David and Benjamin Feigenbaum).

F. H. Hogue of Washington, Kent, Wash.

R. D. Bodle Co., 71 Spring Street, Seattle, Wash.

S. A. Moffett Co., 1331 Western Ave., Seattle, Wash.

Hersey Packing Corp., Seattle, Wash.

The Atlantic Coast Fisheries Co., 4 Fish Pier, Boston.

Booth Fisheries, 309 Jackson Blvd., Chicago.

Liebmann Frozen Food Co., 2837 North West Tenth Street, Oklahoma City, Okla.

Brown Packing Co., Christian & Howard Streets, Philadelphia.

Biddle Purchasing Co., 107 Chambers Street, New York City. (Cliff house Brand).

Swift & Co., Chicago.

Armour & Co., Chicago.

Frozen Fruit Co., St. Louis Mart Building, 419 South 12th Boulevard, St. Louis.

National Dairy Products Corp., 120 Broadway, New York City.

Rocky Mountain Packing Corp., P. O. Box 1618, Salt Lake City, Utah.

Frostkraft Packing Corp., 185 Lombard Street, San Francisco, Calif.

California Packing Corp., 101 California Street, San Francisco, Calif.

North Pacific Cannery & Packers, Inc., Railway Exchange Building, Portland, Ore.

We believe that the organizations listed, in addition to the Birds Eye organization, represent those who are most interested in frosted foods at the present time.

We hope that this information will be of interest to you.

C. S. WHITE

stored in a low-temperature compartment, and the housewife need never worry about the unexpected guest.

Too, she can reduce considerably the number of her shopping trips, and entrust the buying to nearly anyone, or to the telephone, because the matter of selection is no longer a problem with these package foods of uniform quality.

Producers of quick-frozen foods were quick to see the merit of Mr. Ditzell's idea—because their sales will be handicapped until more homes are equipped with low-temperature storage equipment. Birds Eye, the leading producer, furnished a list of 4,950 dealers in their foods to Mr. Ditzell in order to get the ball rolling.

To this list Stewart-Warner mailed

letters suggesting a tie-up. Some 600 food retailers replied to this initial mailing that they would participate in the cooperative drive.

Results already obtained from these food store-refrigerator dealer tie-ups indicate that the idea has real possibilities. Food stores advertise the refrigerator; refrigerator dealers advertise the quick-frozen foods. Sales of quick-frozen foods have gone up, and Dual Temp refrigerators are being sold on the floors of the participating grocery stores.

The big drive will begin in the late fall, to take advantage of increased winter interest in quick-frozen foods. If the tie-up works out as well as preliminary tests would indicate, Stewart-Warner may succeed in doing

(Concluded on Page 5, Column 1)

**DISPLAY FROZEN FOODS!**  
**HERE'S THE ANSWER**  
**TO ALL THE ARGUMENTS AND DISCUSSIONS**  
**KOLD-HOLD**

**PROVIDES UNIFORM, ADEQUATE, CONSTANT, LOW COST REFRIGERATION**

*Plus*

## SELLING DISPLAY!

Only the beautiful new Kold-Hold Full Display Cabinet gives complete visibility of foods on display. Only Kold-Hold can give you this unique construction—a liner formed completely by hold over plates, welded into one integral assembly, sides, ends, and bottom—the very heart of the case.

The displayed foods are clearly seen, brightly illuminated, fully protected—luminescent lamps outside of refrigerated space, and away from non-fogging glasses. **Real Sales Appeal!**—with the most outstanding design development in display case history!

The cabinet has a high lustre enamel finish, chrome trim, black enamel kick-plate, welded construction throughout. Maximum capacity for its size. Be sure to send the coupon NOW for complete, interesting details and price! Write today!



**USE COUPON TODAY!**

**HERE'S** the answer to all of the arguments in REFRIGERATION NEWS on display of frozen foods... the beautiful new Kold-Hold cabinet gives you FULL DISPLAY, without fogging of glass.

Don't misunderstand—this is no peep-hole cabinet, it is a FULL DISPLAY, as illustrated herewith, and at the same time it gives you full protection for the foods inside, because it uses the famous Kold-Hold principle of refrigeration.

Equipped with the unique and exclusive Kold-Hold refrigerator plates, it gives greater economy, equalized temperatures at all points, accurate temperature control in any range, long "off-period" refrigeration in case of temporary power failure. Machine compartment available, takes any standard model compressor.

Yes, it answers every problem for display of frozen foods! Cleans as easy as a china plate. Molded "flip-flop" lids give quick accessibility to every corner. Send at once for full details and prices. **WRITE TODAY!**

**KOLD-HOLD MFG. COMPANY**  
240 MILL STREET, LANSING, MICH.

Kold-Hold Mfg. Co., 240 Mill St., Lansing, Mich.

Without obligation, send me full details on the new Kold-Hold FULL DISPLAY, non-fogging cabinet.

Name.....

Address.....

City..... State.....

## Display That Tells Its Own Story



Convincing displays of the storage capacity of frozen foods compartments, such as that demonstrated in the bottom section of the Stewart-Warner "Dual-Temp" refrigerator shown here, can be a sales aid to dealers who sell refrigerators of such design on the basis of the advancing trend towards the purchase of packaged, frozen foods.



## Frozen Foods Depicted as Boon To Wintertime Refrigerator Selling

(Concluded from Page 4, Column 5) ing something toward evening up its sales curve.

Electric refrigerators by themselves have never been able to break through the spring-buying tradition, but Mr. Ditzell hopes that when they are hooked onto a product which has a winter-buying sales record, this tradition may be broken.

### 26 Items In a Compartment

To test the capacity of the separate frozen foods compartment of the Dual-Temp refrigerator—No. 1 model of the 1939 line of Stewart-Warner refrigerators—Miss Frances Weedman, home economist, recently held a demonstration. In the test, 26 items with a total weight exceeding 50 pounds were placed within the compartment. The list of items follows:

Article	Weight Lbs. Oz.
Turkey .....	10 ..
Rib roast .....	6 ..
6 pork chops .....	1 8
6 lamb chops .....	1 10
Round steak .....	2 ..
Sausage links .....	1 ..
Frying chicken .....	2 8
Salmon steak .....	2 ..
Shrimp .....	11
Crab meat .....	10
Lobster .....	10
6 ears corn .....	1 ..
1 pkg. lima beans .....	13
1 pkg. peas .....	12
1 pkg. green beans .....	10
1 pkg. Brussels sprouts .....	10
1 pkg. wax beans .....	10
1 pkg. red raspberries .....	10
1 pkg. blueberries .....	11
2 pkgs. asparagus .....	24
2 pkgs. peas & carrots .....	24
2 pkgs. young berries .....	20
2 pkgs. sliced peaches .....	2 ..
2 pkgs. strawberries .....	2 ..
1/2 gallon ice cream .....	3 ..
96 ice cubes .....	8 ..
Total weight .....	54 13

## How a Grocery Store Advertises Refrigerators

**Grosdeck's**  
QUALITY! PLUS SATISFACTION! PLUS THRIFT!

**Week-End Specials ... Plus Demonstration!**

<p><b>Meat Specials</b></p> <p>Chuck Roast ..... lb. 25c</p> <p>Boneless Rolled Rib Roast ..... lb. 33c</p> <p><b>Ham and Veal</b> ..... 2 lbs. 59c</p> <p>Legs of Lamb ..... lb. 31c</p> <p>Boneless Veal Roast ..... lb. 29c</p> <p>Shoulder Veal Chops ..... lb. 23c</p>	<p><b>Veal for Stuffing</b> ..... lb. 15c</p> <p>Pork Loin Roast, rib end ..... lb. 19c</p> <p>Short Ribs Beef ..... lb. 15c</p> <p>Cold Cuts ..... lb. 27c</p> <p>Shankless Calves ..... lb. 19c</p> <p>Fresh Ham Salad ..... lb. 29c</p> <p>Pure Pork Sausage ..... lb. 25c</p> <p>Yorkshire Butter ..... 2 lbs. 51c</p>
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**TRY OUR Johnson's Enamel**  
To Touch Up That Kitchen Set, Porcelain, Bathtub, or any part, of your home, there is a solution. Write to the Sales Dept. of Johnson's Enamel.

**TRY OUR POLAR FROSTED FOODS:**

<p>Peas ..... 2 lbs. 19c</p> <p>Lemons ..... doz. 19c</p> <p>Oranges ..... doz. 25c</p> <p>Strawberries ..... qt. 19c</p>	<p>Sprouts ..... pkg. 19c</p> <p>Corn ..... pkg. 18c</p> <p>Beans ..... pkg. 20c</p>
---	--

**DEMONSTRATION — Saturday Only —** SEE POLAR FROSTED FOODS In the New Stewart Warner

**FREE —** **GUARDS FOOD 3 NEW WAYS** **FREE Dinner Set**

**STEWART-WARNER DUAL-TEMP**  
Refrigerator with Sterile Air

**KEEPS VEGETABLES FRESH AND CRISP WITHOUT COVERS**

In the moist humid, first cold of this upper compartment, foods — even lettuce and celery — stay fresh and crisp right on the open shelf. Handy flexible 1/2" x 4" space and shelf space is a revelation!

**GROSDECK'S**  
296 FIRST STREET PHONE 456

## DISPLAY vs STORAGE TYPE CABINETS

### 'Frozen Foods Distributors More Interested In Selling Cheap Cabinet Than Foods'—Corbett

Maurice A. Corbett  
Consultant  
415 West 23rd St., New York

Publisher:

Whatever may be your own views on display vs. storage for frosted foods at point-of-sale in retail outlets, you are to be commended for devoting your editorial pages to a discussion of this important subject from both points of view.

Mr. White's letter, published in your issue of May 31, is a clear cut presentation favoring the use of display equipment in frosted foods merchandising. Few experienced food merchandisers will argue with the logic of the argument he makes in behalf of display.

As pointed out in my recent—and latest—analysis of the frosted food industry, there was pointed out that the advertising, merchandising, sales promotion, and financial situation affecting the Birds Eye position in the industry, precluded comparison with the rest of the industry.

In other words, Birds Eye is now, and is likely to be for some time to come, a thing apart in the frosted food industry. From their point of view, they are probably acting wisely in discouraging the use of display equipment until they have solidly established the Birds Eye line with the cream of the retail trade from coast to coast.

Out of 100,000 potential outlets the line is at present in but about 5,000. While display would attract consumers to any brand of frosted foods, they prefer to employ advertising and other sales helps to sell consumers—not just frosted foods, but Birds Eye Frosted Foods.

Back in 1937 certain other brand-owners in the business jumped on the tail board of the Birds Eye wagon and for a while got a free ride. At the moment the tail board is closed and no one is getting a free ride. Had these distributors not cried to heaven for a "cheap" case or cabinet, and had they continued to recommend display equipment, their present position would not be as precarious as it is.

Upon the entry of the ice cream equipment manufacturers into the

picture, the renewed drive for new outlets was predicated more on a desire to sell equipment to dealers, than frosted foods to housewives. The lure of a generous "kickback" was so strong that it short sighted the vision of more than one frosted food distributor who still cannot understand why consumers are indifferent to his brand of frosted foods.

What he does not consider is that he is not only not advertising his brand, but he is expecting consumers to guess that dealers carry it—in a low temperature cracker barrel.

I for one do not blame the ice cream equipment manufacturers for this condition. They have a right to develop their cabinet business to the best of their ability. That they

cashed in on the demand for a "cheap" case or cabinet is their own business. But this discussion is not concerned with the fortunes of either the case or cabinet manufacturers. It is concerned with the fortunes of various types of frosted foodsters who make up the entire frosted food industry.

That they are suffering because the cabinets contribute nothing to the job of selling the housewife is common knowledge in the food industry, no matter what the cabinet companies, or the frosted foodsters themselves say about it.

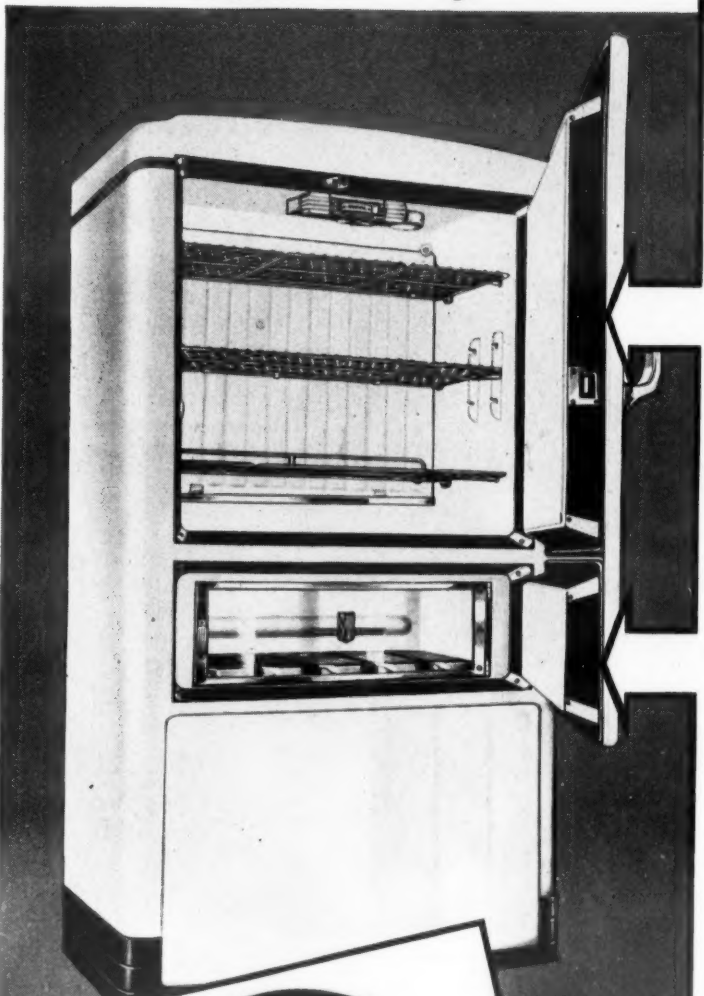
You may find the enclosed reprint of an article dealing with this subject of interest. It appeared last August in the Frozen Foods Recorder section of The Western Canner & Packer. While the producers, in the main, agreed with the view presented, few of them actually control the distribution of their products, this function being in the hands of the brand-owners and other distributors. This article refutes the contention that the case companies have not been active in promoting distribu-

On the contrary, considerable of the industry's present distribution was due to the efforts of case equipment salesmen, most of whom stopped selling frosted foods to new outlets when the brand-owner's "kickback" was taken out of their pockets. I personally know of one group of 200 case salesmen whose efforts put frosted foods in better than 700 new outlets. Today this same group of salesmen refuse to have anything to do with the frosted foods business. And these men were better frosted food salesmen than most of the talent in the industry today.

Evolutionary processes will probably bring the industry around in time to display equipment. When this takes place there will be an even larger market for storage cabinets than at present. When dealers enjoy a steady volume of business in quick-frozen staple perishables, they will need storage cabinets from which to feed their display cases. Meanwhile, lack of a long range view is retarding sales of cases and cabinets—and frosted foods.

MAURICE A. CORBETT

## BIGGEST SALES GAIN IN REFRIGERATION Follows Introduction of New Dual-Temp with 3 Unequalled Food Safeguards



SINCE refrigerator sales started climbing in March, Stewart-Warner sales have climbed faster than any others in the industry according to N. E. M. A. figures! And one reason is that the Stewart-Warner Dual-Temp—most imitated development in the industry—is still unequalled in the advantages it offers, and unequalled in ability to bring prospects in to look... and buy!

### STERILIZED MOIST COLD Keeps Foods Without Drying

Only the Dual-Temp keeps fresh foods in high-humidity sterilized cold—keeps them crisp, moist and flavorful without covering—without drying—without spoiling—longer than ever before! Because only the Dual-Temp combines Stewart-Warner's patented automatic control of dual temperatures—plus elimination of frost-collecting evaporators—plus an amazing new sterilizer ray in which mold and bacteria cannot live!

### 22°-BELOW-FREEZING CHAMBER

#### Keeps Frozen Foods for Months

Only the Dual-Temp has Stewart-Warner's steady 22°-below-freezing protection for frozen foods, meats, fish, game, etc., maintained by patented automatic control! The Dual-Temp meets the frozen-foods industry's requirements for protecting frozen foods for months! It freezes ice cubes in record time—stores over 40 pounds of ice cubes at once—and in actual tests has held 96 ice cubes and 50 pounds of food at once in the freezing chamber alone!

## A Record Value in Every Price Class!



### New Sterilizer Lamp Keeps Foods Safer!

Foods keep longer—stay safer and more wholesome—in the Dual-Temp because they're kept in Sterile Air! Air is purified constantly by an amazing Sterilizer Ray Lamp in whose rays bacteria and mold can't live! It's science's latest contribution to food protection—made practical by Stewart-Warner because the Dual-Temp ends need of covered pans and dishes—giving foods full benefit from this protection.

The Stewart-Warner line meets every prospect's requirements—from the revolutionary Dual-Temp for those demanding the finest—to record-value Challenger models for those who want dependable refrigeration at lowest price. Illustrated is Challenger Model 559—with super-power hermetic unit and many important advantages at economy price. Get in the profit parade! Talk to your Stewart-Warner distributor now!

**STEWART-WARNER**  
SAV-A-STEP REFRIGERATORS AND RANGES • MAGIC KEYBOARD RADIOS  
CHICAGO, ILLINOIS

Typical of the tie-in with grocery stores handling frozen foods is this advertisement, which tells of a demonstration of frozen foods in a household refrigerator to be held on a Saturday, and offers extra inducements in form of premiums for those witnessing the demonstration.



## Commercial Refrigeration

### New Farm Cabinet Is 'Home' Locker Plant

WEST CHESTER, Pa.—Said to be suitable for use as a "home" refrigerated locker plant is a new freezer-storage cabinet introduced recently for farm use by Esco Cabinet Co.

Built along the general lines of Esco milk coolers, the cabinet is divided into two compartments. The smaller one of 5-cu. ft. capacity is the freezer compartment in which temperatures of  $-5^{\circ}$  F. are said to be obtained.

Forced air circulation is accomplished in this compartment by means of a fan located on top of a "duct" at the rear of the compartment, which duct brings the air from the bottom of the shelf up to the fan. Free airflow through the shelves is accomplished by staggering the shelves.

The larger section of 25-cu. ft. capacity provides a storage space which is held at  $5^{\circ}$  F. Refrigeration in both compartments is by means of coils fastened onto the side walls of the cabinet.

The cabinet is operated from a  $\frac{1}{4}$ -hp. condensing unit, which can be installed on top of the cabinet, or remotely, as desired. The system is equipped with Fedders expansion valves, check valves, and heat exchangers.

### Frick Gets Contract To Equip Missouri River Terminal & Market

KANSAS CITY, Mo.—Contract covering the refrigerating and ice-making equipment for the Food Market and Terminal being built on the Missouri river here has been awarded to Frick Co., Waynesboro, Pa. The project, which is being financed through PWA, comprises a five-story building with a million and a quarter cubic feet of cold storage space, and capacity for making 160 or more tons of ice daily.

Three big four-cylinder compressors and a large two-cylinder machine will be required to handle this work. The compressors will be driven by direct-connected synchronous motors totaling 900 hp. Nearly 113,000 feet of 2-inch piping will be used to cool the storage rooms.

Ice-making tank, which is 115 feet long, will contain more than 1,900 welded ice cans. A complete refrigerated locker system of the "Polar Chest" type will be included. Forty thousand pounds of ammonia will be shipped to the job in a tank car.

Architects and engineers on the project are Alonzo H. Gentry, Voskamp & Neville, Inc., Joseph W. Radotinsky, and Walter F. Schulz.

### Institutional Supplies Firm To Be Boston G-E Distributor

BOSTON—Second major distributorship for General Electric commercial refrigeration products to be appointed under the newly formed G-E air conditioning and commercial refrigeration department has been assigned to the Jones, McDuffee & Stratton Corp. of Boston.

This company will be exclusive distributor for the complete line handled for the past six months by the G-E factory branch in Boston, and prior to that by the W. L. Thompson Co.

Jones, McDuffee & Stratton Corp., with a history of 128 years of business in Boston as importers and distributors of tableware, is the largest institutional supply house in New England. The company's display rooms are located at 367-377 Boylston St. The house handles china, glass, furniture, kitchen equipment, and other institutional, hotel, and restaurant supplies, including the entire line of Edison General Electric Co. commercial cooking equipment.

Vice president in charge of institutional department sales for Jones, McDuffee & Stratton is Windsor L. Taliaferro. Ward I. Nicholas will be in charge of sales of commercial refrigeration products. He was formerly commercial sales manager for the G-E line with the National Electric Supply Co. of Washington, D. C. The new distributor will engage in both retail and wholesale business.

### York June Sales Gain 32% Over 1938

YORK, Pa.—A bumper crop of small and medium-sized orders for standard products, rather than any one order of unusual size or character, swelled the June sales volume of York Ice Machinery Corp. to a point 32% above that for the same month last year, the company's stockholders were informed in a recent letter.

Both the air-conditioning and refrigeration branches of the corporation participated in this increase. York's fiscal quarter ending June 30 showed sales of \$4,197,624, a 7% increase over the same quarter in 1938. And on top of this, President W. S. Shipley reports that July sales thus far and the outlook for prospective business give promise of continued improvement.

### Modern Wine Coolers Cut 'Aging' Time & Improve Product

DETROIT—To aid in satisfying the American demand for wine of absolute clarity, Temprite Products Corp. has introduced a line of instantaneous wine coolers which induce immediate precipitation of organic matter in the wine and accomplish in a few hours the same results which it takes nine months to a year to obtain under the "storage" or "time" system.

Best clarification is obtained, it is said, when wine is reduced to a point just above freezing—the range is usually 22 to 28° F., depending upon the nature of the wine—and use of a closed cooler to prevent oxidation by the air is considered the best practice.

Features of the Temprite wine coolers—of which there are four models—are enumerated by the company as follows:

#### CLOSE CONTROL AFFORDED

They provide the positive and close temperature control required in such a cooling procedure, and can be set to maintain wine temperatures within plus or minus 1° at any point.

They operate economically because of the patented principle of direct heat transfer which they employ. The coil carrying the wine to be cooled is submerged in the liquid refrigerant, and thus no refrigerating effect is lost. The Temprite units also operate at the highest possible suction pressure for a given delivery temperature, another aid to economy, and these wine coolers will increase the capacity of any refrigerating compressor to which they are connected.

#### CONTAMINATION BANISHED

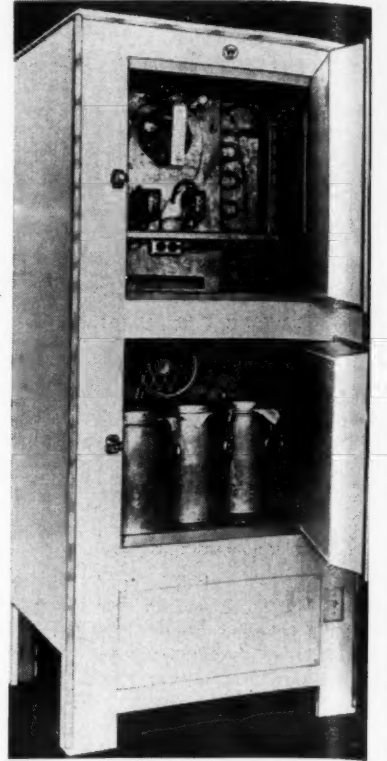
Possibility of contamination or oxidation by air is eliminated, as all cooling takes place in the coils submerged in the liquid refrigerant.

Wine inlets and outlets are located on the bottom of the cooler shell assemblies, insuring maximum cooling efficiency and thorough drainage whenever inlet and outlet hoses are removed.

Coolers can be supplied with either pure copper or pure stainless steel coils. They may be charged with either methyl chloride or "Freon-12" refrigerant.

Use of a Temprite system does not require any change in the design or construction of the ordinary wine "storage" vat and does not necessitate the use of any refrigeration equipment or cooling coils inside of the vat.

### Cabinet For Laboratory Has Unusual System



A strip heater plus close-operating controls allow temperatures to be held within 1° F. in this cabinet.

CHICAGO—A special culture cabinet which holds temperatures within very close limits has been designed by engineers of the Westinghouse Electric Supply Co. for the Humboldt Dairy Products Co. of Chicago.

This cabinet was designed to hold four 5-gallon ice cream cans of 40-lb. capacity each, in each of the two compartments. The system will maintain different temperatures in each compartment regardless of outside temperatures.

Upper compartment of the culture development section is kept at exactly 72° F. winter and summer. This is accomplished by installing a heating element controlled by a close differential thermostat that turns on the heating element and circulating fan at 70° F. and shuts it off at 71°. Another like thermostat operates an electric solenoid valve in the suction line of the bare pipe coils that opens at 73° F. and shuts off at 72°.

The lower compartment, which houses four cans to keep the culture dormant until needed, is cooled by a forced-draft unit that is operated by a pressurestat and is set for 35° F. average temperature, the low limit being 34° and the high 36°. Three-inch cork insulation was used throughout in the cabinet, with 2 inches of cork between the sections.

The cabinet is self-contained, refrigeration being furnished by a bottom-mounted Westinghouse condensing unit.

Jos. H. Lazar of the Chicago Wesco company drew the original design for the cabinet.

### 70% of Commercial Sales Of Utility Is Cooling Jobs

ATLANTA—Commercial refrigeration, with \$81,060.88, was the leading contributor to the \$116,924.34 in commercial equipment sales reported by Georgia Power Co. salesmen for the first six months of this year.

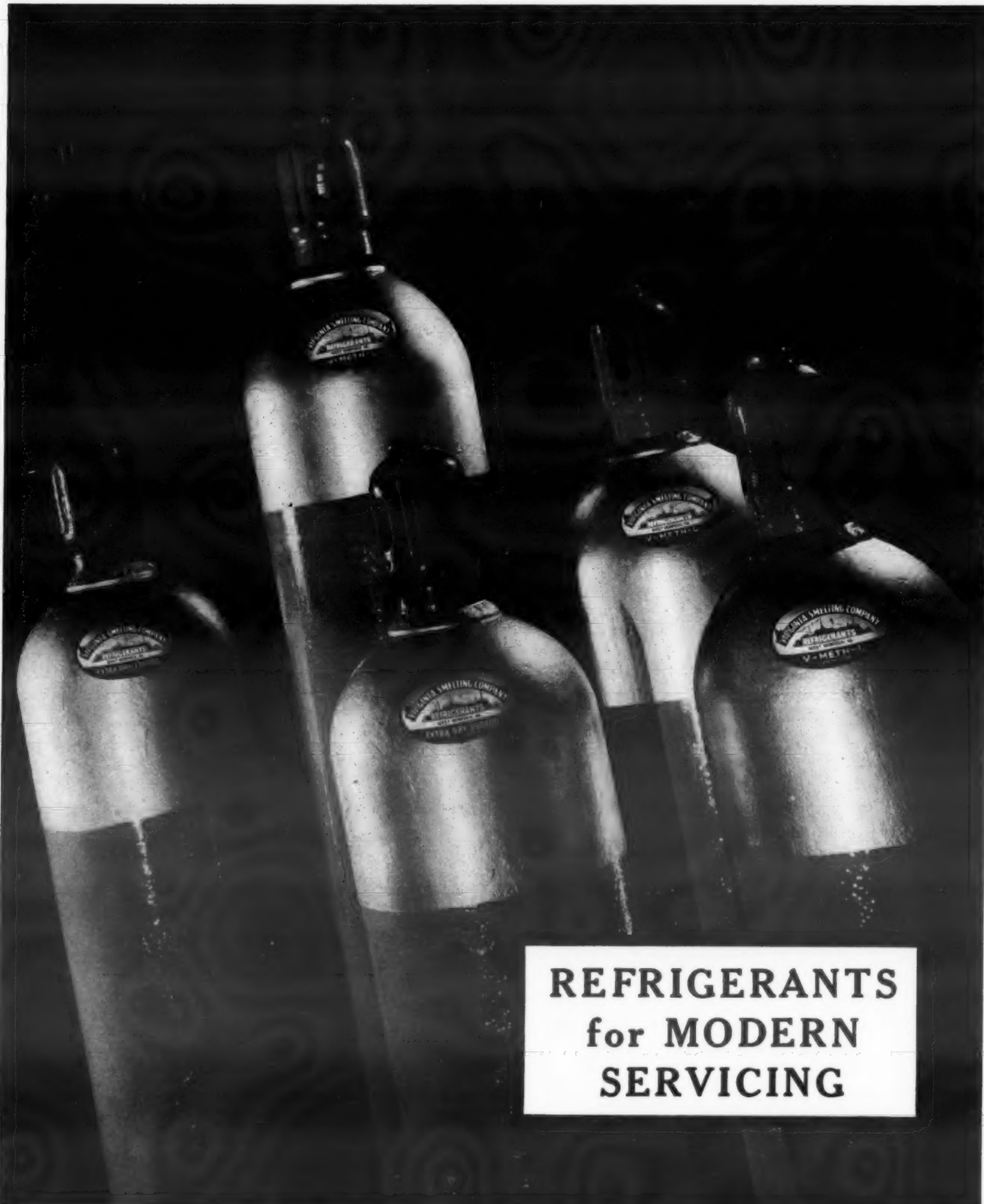
Ventilation equipment was second to refrigeration in the half-year totals, with \$24,695.76; cooking and heating equipment sales totaled \$14,177.61; water heaters, \$6,451.16; pumps, \$15,803.50.

### "TAILORED" to fit the installation

336 Rempe units covering every size, every refrigerant and every need—a complete selection so you can make a precision selection of JUST EXACTLY WHAT THE INSTALLATION REQUIRES. No waste of original cost or current cost through picking one "a size larger just to be sure". WRITE FOR complete data. Free on request.



**REMPE Unit COOLERS**  
REMPE CO., 340 N. Sacramento Blvd., CHICAGO



**REFRIGERANTS  
for MODERN  
SERVICING**

**V-METH-L and EXTRA DRY  
ESOTO**  
VIRGINIA SMELTING CO.  
WEST NORFOLK, VIRGINIA



# Air Conditioning

## Frigidaire System In Futurama Cools Thousands of World's Fair Visitors

NEW YORK CITY—Eight separate air-conditioning systems, ranging from self-contained room coolers to large multiple units, have been installed in General Motors' "Highways and Horizons" building at the New York World's Fair for the comfort of the visitors and sightseers who will visit the structure during the hot summer months.

A total of 12 different systems condition the air in eight of the G-M sections, handling more than 100,000 cu. ft. of air per minute, and providing a total refrigeration capacity of 576 tons. All the equipment was manufactured by Frigidaire.

Largest installation project is that used to condition the conveyor tunnel of the spectacular Futurama, a visionary world of tomorrow in miniature which is 1,400 feet long and can be viewed by 2,300 people per hour.

### 100% FRESH AIR

Air conditioning of this space is handled by five separate systems, located in different sections of the building. All of the air conditioned is taken directly from the outside, and is supplied through ceiling diffusers spaced approximately 8 feet on centers. The combined systems serving the Futurama handle 35,250 cu. ft. of air per minute, with a total refrigeration capacity of 124 tons.

In addition to the tunnel proper, a separate system has been installed for the conditioning of the sound control room. This particular room contains a sound projector especially built for the occasion, and representative of the continual progress of research in modern laboratories. The projector is the first of its kind ever built, and is of such an intricate design that Frigidaire engineers were ordered to meet the most strict requirements in air conditioning to insure proper operation.

### CONSTANT HUMIDITY

In order that the delicate sound film does not become distorted in its passage through the machine and its many photo-electric cells, it is necessary to maintain a constant humidity as well as temperature. To accomplish this, all ductwork is insulated against sound and soldered to prevent leakage of air, and the room is painted with vapor proof paint to aid in maintaining the required differences in moisture content between the room and surrounding areas.

The system distributes 3,000 cu. ft. of air per minute to the room through a ceiling diffuser with return air grilles being located at the floor. Also, approximately 400 cu. ft. of air per minute is exhausted from the room through the ceiling. Due to the importance of keeping this system running at all times, an auxiliary standby unit has been provided, with the controls for the main unit being duplicated on the latter.

Air conditioning of the auditorium which seats 622 people is divided into three groups, with separate equipment each for the auditorium proper, the stage, and projection booth.

A central system located at a

lower level controls the seating space, supplying air through four side wall outlets at the ceiling, one at each side of the auditorium, and two at the rear. These outlets are provided with deflectors to control air distribution, and the recirculated air is exhausted through mushroom outlets in the floor. A total of 15,500 cu. ft. of air per minute is handled by this system, which has a refrigeration capacity of 64 tons.

A suspended unit on the stage has a refrigeration capacity of 24 tons, and supplies the conditioned air through outlets in the ceiling which have especially designed deflectors to prevent any movement of air towards the curtains. The balance of the auditorium equipment consists of a portable self-contained unit of 3-ton capacity, which is located in the projection booth.

### 14 ANEMOSTATS

In the Frigidaire display section of the building, air-conditioning equipment consists of a complete plant located in the basement. A total of 37,200 cu. ft. of air per minute is supplied the exhibit room through 14 cone-shaped "Anemostats" located in the ceiling. Recirculated air is returned through an 86-foot continuous grille, which is located at the base of the wall. This system has a total refrigeration capacity of 123 tons.

Located on the top floor of the building is a club room section which consists of a private lounge, dealers' lounge, main office, press room, and headquarters of the department of public relations. Air conditioning of this section is handled by two systems; the first comprising a central system of 43-ton capacity which handles 12,000 cu. ft. of air per minute; and the other consisting of 11 self-contained room coolers, strategically placed to give additional capacity and to maintain individual room temperature.

### FIRST AID ROOM

Completing the equipment is a 3-ton self-contained unit installed in the first aid room, and a separate system for conditioning the research section. The latter system is located in the basement and has a total refrigeration capacity of 58 tons, handling 19,000 cu. ft. of air per minute.

Air is supplied through ducts to outlets in the sidewalls as well as two Anemostats in the ceiling. As in the auditorium system, return air is again taken through grilles in sidewalls near the floor.

### 54 EVAPORATORS

Incorporating 54 evaporators and 14 evaporative condensers, the various systems were designed and installed by Frigidaire engineers. Detail shop drawings were made for all sheet metal ductwork which permitted fabrication in the shop, with all ductwork being delivered to the job ready to install.

The finished job illustrates the integral part of construction which air conditioning will play in the building of tomorrow.

## Michigan Association Free of Labor Rackets

DETROIT—No labor sabotage has been reported by member firms in the Air Conditioning Association of Michigan in connection with the investigation of building trades rackets by Robert M. Arnold, chief investigator under Attorney General Thomas Read of Michigan.

Storm center of the inquiry is Harry L. Ames, former building trades labor organizer in the Detroit area, who served an Indiana prison sentence for dynamiting a \$1,700,000 Hammond, Ind. theater a decade ago.

Detroit builders, particularly in the small home field, report numerous instances of "shake-downs" by labor racketeers, bombings of homes under construction, and many cases of petty sabotage.

Louis S. Morse, Jr., in charge of air conditioning for the Detroit branch of Western & Campbell, York distributor, believes that the fine relations which exist between the trades and air-conditioning firms in the Detroit area have been brought about by a mutual understanding of the problems involved.

"We employ a very high type of mechanic in air-conditioning work," Mr. Morse stated. "These men take a great deal of pride in their work, and understand that nothing can be gained by creating difficulties for the employing firm. I believe that it is the inherent characteristics of the men which have kept us from becoming involved in the troubles which have beset the Detroit building industry."

H. C. LeVine, president of Atmospheric Control Corp., Carrier distributor, stated that his firm had not had to deal with any sabotage or shake-down tactics in recent years.

"About three years ago we had a motor starter taken from a job, but believe that this loss was due to a jurisdictional dispute, and not the direct result of any racketeering tactics," Mr. LeVine said.

William Heaney of American Refrigerating Co. and John H. Keller of Mechanical Heat & Cold, Inc. both reported that, to their knowledge, no sabotage had ever existed in air-conditioning work in Detroit.

Other member firms in the Air Conditioning Association of Michigan, which represents a large majority of the industry in Detroit, gave similar reports.

## 'Dr. of Air Conditioning' Educates Public on All Cooling Methods

KALAMAZOO, Mich.—"Doctor of Air Conditioning" is the title which most successful air-conditioning salesmen might well have a right to append to their names, for a man really has to be an educator of advanced degree in order to sell air conditioning today.

At least that is the belief of R. H. Thomas, who handles Frick air conditioning and commercial refrigeration equipment here under the name Thomas Engineering Co. Educating the public not only as to the general advantages of air conditioning but also as to what to look for in and what to expect from the

equipment they buy is the big problem facing the air-conditioning industry today, Mr. Thomas opined, giving voice to a sentiment commonly felt throughout the industry.

Most air-conditioning installations in Kalamazoo, he pointed out, have been of the well-water type, as Kalamazoo's water comes from an 800-ft. artesian well and is said to never run warmer than 52° F. at any time during the year. Chief air-conditioning problem here, Mr. Thomas declared, is that of water disposal. No drain water from these air-conditioning systems may be emptied into the town's sewers, so each system must have its own disposal well.

## Trane Grads Placed In Company Branches

LACROSSE, Wis.—Fifteen young graduates of accredited engineering schools have been selected for the 1939 student training course of the Trane Co. The 15 young men were chosen from some 300 hand-picked applicants out of the college men interested in specialized training in heating, cooling, and air conditioning.

Among the colleges and universities represented in this year's student class are Virginia Military Institute, Georgia Tech, Carnegie Tech, Stanford, California Institute of Technology, Purdue, Wisconsin, Rensselaer Polytechnic Institute, Michigan, Ohio State, and Iowa State.

More than 200 graduates of the Trane course are now actively engaged in various Trane branch offices throughout the country.

**WITH M&E COMPRESSORS**

*A Difficult Job Handled to Perfection*

Two extra large showcases, and a massive 'walk-in' are on constant, capacity duty in this new Baltimore Market—one of a busy chain in Philadelphia. Both showcases are refrigerated by one 1½ HP water cooled heavy duty compressor (1125 WMC). It is located in the rear of the market on the same floor. Over 100 ft. of refrigerant lines are connected to each case from the compressor. The 'walk-in' is refrigerated by a 1 HP air cooled unit (725 MC).

Baltimore Markets specify M&E Compressors, and like other users, have found that they render thoroughly reliable service under the heaviest load conditions.

**SHOWCASE DEALERS**  
Write for the complete M&E Catalog

M&E Compressors installed by The Merchants Refrigeration Service, Roxborough, Penna.

**M&E**  
EST. 1856

The M&E Commercial Credit Plan is Available Everywhere.

**MERCHANT & EVANS CO.**  
PHILADELPHIA, PENNA. • Plant: LANCASTER, PENNA.

## DEALERS-DISTRIBUTORS

Large well-rated manufacturer, with national organization, will appoint several distributors and dealers to complete merchandising setup. Complete line of bituminous and anthracite automatic burners, nationally advertised, competitively priced, backed by extensive promotion. Write us for information and sales analysis of your territory.

LINK-BELT COMPANY, Stoker Division  
2410 W. 18th St., Chicago, Ill.

7805



# Air Conditioning

## Conditionaire, Inc. To Sell Curtis Units

DETROIT—Formation of Conditionaire, Inc. for the purpose of distributing a full line of air-conditioning equipment has been announced by Milton C. Adler, general manager of the new company. Both summer and winter air-conditioning equipment will be marketed from the company's new showrooms at 4240 Cass Ave.

Conditionaire, Inc. is associated with Sanford D. Adler, Inc., which has been active in the Detroit building and lumber industry for a number of years.

The new concern has been appointed distributor for the Curtis line of refrigeration and air-conditioning equipment, handling commercial compressors, self-contained store-cooling units and air-conditioning compressors up to 30-hp. capacity. It is also a dealer for the Airtemp "Cool Breeze" window-type cooling unit.

For the small home market Conditionaire, Inc. will distribute the "Gas Miser" furnace, built by Floral City Heater Co., Monroe, Mich. The company also plans to merchandise stokers, gas-fired unit heaters, and other types of automatic heating equipment.

According to Mr. Adler, the company will maintain a retail selling organization, and will also establish dealers throughout the state. Initial retail force will be 22 men.



## New Profits for You with Unit Air Conditioners

The ultimate in air conditioning for restaurants, offices, or shops. Built for heavy duty; large slow-speed refrigerating plant with water-cooled motor gives greatest capacity, longest life. Portable, tho offering merits of a central system when ducts are used. Backed by 57 years experience, Frick Unit Air Conditioners have proved themselves practical and economical—most profitable for you to sell. Write for details.

FRICK COMPANY, Waynesboro, Pa.

## Small Jobs Bolster Omaha Cooling Sales

OMAHA, Neb.—Thirty-five commercial air-conditioning systems, with a total of 1,147 hp., were installed in Omaha buildings during the first half of the year, reports W. R. White, manager of Nebraska Power Co.'s air-conditioning department.

These plants ranged in size from 2½ to 600 hp., largest being the 600-hp. installation in the Farm Credit building. Other large systems were installed in the Paxton hotel (100 hp.) and the Union State Bank building (68 hp.).

Forty jobs, with a total of 1,977 hp., were installed during the first six months of last year. Biggest job of the year was the 1,466-hp. plant installed in the Union Pacific Railroad building.

July's hot weather this year has brought a brisk demand for small commercial systems, as well as for portable units for installation in private homes, Mr. White reports. He predicts that this type of installation will be considerably more numerous this year than last.

## Well System Explodes

DETROIT—Ray Venderbush of the Venderbush Sheet Metal Co., Detroit air-conditioning contractor, was seriously injured in a recent explosion at The Bowery, a Hamtramck, Mich. night club.

Fire Chief Edward Sawtell attributed the explosion to leaking gas from a well being driven for the night club's air-conditioning system. The injured man told Chief Sawtell that a spark from a motor apparently ignited the gas.

Adele LaRue and Estelle Sigon, waitresses, suffered shock from the accident.

## Four Kinds of Air Outlets Used By Washington Co.



Barber-Colman Venturi-flo outlets were installed in the Park Lane Restaurant by Combustioneer Corp., Washington, D. C.

The same company used Tuttle & Bailey two-way deflection grilles in Costin's Hof-Brau to distribute air from the 10-ton Westinghouse system.



Uni-flo grilles were used in Myra's Beauty Salon, Washington, D. C. A 15-ton Westinghouse system was equipped with an evaporative condenser.

Anemostats mounted flush with the ceiling provide draftless air distribution in the Neptune Room of the Earle Theater Building, Washington, D. C.

## Increased CAPACITY and EFFICIENCY with this Heat Interchanger...

• This new Mueller Brass Co. Heat Interchanger, owing to its shell and tube construction, provides maximum heat transfer with minimum pressure drop. This compact unit can be easily installed near the evaporator outlet where it will be most efficient. Furnished in two sizes with 79 and 170 square inches of heat transfer service. Order through your jobber.

**MUELLER BRASS CO.**  
PORT HURON MICH.

## Restaurant Conditioning Leads In New York City

NEW YORK CITY—Three hundred and eighteen installations of air-conditioning equipment with a combined horsepower rating of 10,412.48 were made in the New York metropolitan area during the first six months of this year, reports made to Consolidated Edison Co. reveal.

Restaurants alone accounted for almost a third of the half-year total, 103 such installations being reported. Second in number were retail stores, with 70 installations, while World's Fair jobs placed third with 34. Also comparatively high were private offices, with 25 installations reported.

Ten department store systems were installed during the period, other large installations being 12 hotels' public rooms, 12 theaters, and 15 showrooms. Seven residential installations were reported, all of them in the small-capacity sizes.

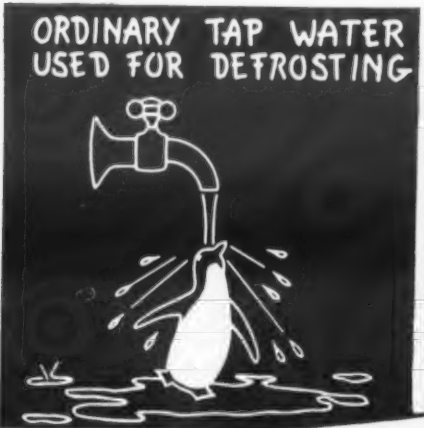
A tabulated list of air-conditioning installations made during the first six months of the year follows:

Banks	3
Barber-Beauty Shops	4

Clubs	2
Funeral Homes	3
Hotel Guest Room	1
Hotel Public Rooms	12
Office Buildings	2
Offices	25
Lecture Hall	1
Restaurants	103
Showrooms	15
Department Stores	70
Retail Stores	10
Theaters	12
Bowling Alley	1
New York World's Fair	34
Residential	7
Misc. Commercial	5
Candy Mfg.	3
Fur Storage	1
Drug Mfg.	1
Storage	1
Misc. Industrial	2

## Air Conditioning Dealers Pay \$50 Privilege Tax

LITTLE ROCK, Ark.—A privilege tax of \$50 annually was levied against dealers selling air-conditioning units at a meeting of the City Council recently. The ordinance was passed in connection with two others, which assessed increased taxes on bakery and bottled drink plant owners here.



ORDINARY TAP WATER USED FOR DEFROSTING



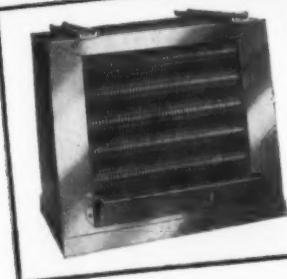
4 MINUTES SUFFICE TO DEFROST COMPLETELY



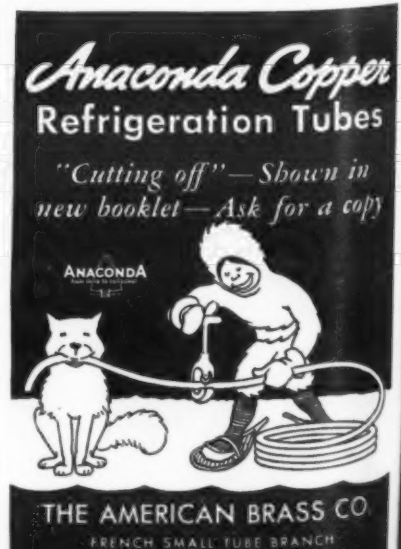
WATER SPEEDILY REMOVES FROST ACCUMULATION



EXTRA-LOW COST OF INSTALLATION AND OPERATION



**BUSH RECOLD DEFROSTO UNIT COOLERS** operate on a completely new principle which makes possible simple, fast and inexpensive defrosting with ordinary tap water instead of more costly electrical apparatus or brine systems. The simplicity of this method plus the short time required (3 to 4 minutes) enables the user to defrost manually with ease. You will be interested in a complete description of these coolers which appears in the new Bush catalog, together with other Bush Finned Tube Products. Write for your copy TODAY.





## Major Appliances

### 'Bud' Fischer Is Advanced By Hotpoint



#### To Cover All Districts as Wholesale Representative

CHICAGO—G. W. (Bud) Fischer has been appointed wholesale representative of the general sales staff of Edison General Electric Appliance Co., Inc., manufacturer of Hotpoint appliances. He will be available for special sales activities, consultation, or analytical operations in any of the company's districts throughout the country.

Mr. Fischer has had many years of experience with the operations of wholesale distributors, and has carried on a great deal of specialized sales work in connection with his various activities in the Hotpoint organization.

### FTC Scores Patterson, Maker of 'Speed King' Water Heater

WASHINGTON, D. C.—The Federal Trade Commission has issued a complaint against L. B. Patterson, trading as Nu-Way Mfg., Des Moines, Iowa, alleging false and misleading representations in the sale and distribution of an electric water heater, designated Speed King Water Heater.

The complaint alleges that direct or implied claims of the respondent as to the efficacy of his heater and as to the earnings made by his representatives are false and misleading.

Allegations cited in the complaint as being false are that the Speed King Heater provides the fastest way known of heating water; that it boils water almost instantly, or in 60 seconds; that it saves up to 50% of gas and fuel bills; that it does the work of heaters costing 40 to 50 times as much; and that agents selling the heater can make profits of 141 to 218%.

It is also alleged that the respondent implies that his heater has been approved by an accredited and recognized laboratory, when such is not a fact.

### Philco To Aim At Rural Refrigeration Market

PHILADELPHIA—Describing the country's recently electrified rural areas as the "greatest pre-sold market for the refrigeration dealer today," Thomas A. Kennally, Philco's general sales manager, has indicated that a goodly portion of the sales effort placed behind Philco's "Conservador" refrigerator will be aimed in this direction.

"The farmer," he explained, "already has been educated to the advantages of the electric refrigerator, so generally a refrigerator is the first thing he buys after electricity is made available to his farm."

### Bradley & Wogan Represent 'Speed Queen' Laundry Line

RIPON, Wis.—L. J. Bradley and J. C. Wogan have been appointed direct factory representatives of Barlow & Seelig on the latter's line of Speed Queen washers and ironers. Mr. Bradley will cover the Detroit area, while Mr. Wogan's territory will comprise Southern California.

### Hertzler Named Mgr. Of G-E Cleaner Sales

BRIDGEPORT, Conn.—Lloyd G. Hertzler, vacuum cleaner sales specialist for the General Electric Co. in Philadelphia for the past two and a half years, has been appointed sales manager of the G-E cleaner section, and will make his headquarters here.

Upon his graduation from Pennsylvania Business College, Mr. Hertzler became an assistant vice president of the National Income System, engaging in merchandising, management, and promotion with small companies on a retainer basis.

In 1930 he joined the Electrical Association of Philadelphia as merchandising manager and assistant to George R. Conover. He was closely associated with Mr. Conover in developing new appliance ideas and sponsoring industry promotions.

His first interest in vacuum cleaners came in 1934 when he staged the first cooperative cleaner promotion for the industry. Similar promotions spread to other parts of the country, increasing his contacts with electrical leagues in other sections.

He joined General Electric in 1937 as cleaner specialist in the Philadelphia office, and was assigned the territory extending from Philadelphia and Pittsburgh into the southernmost states.

J. C. Hunt, who has been assistant to the manager of the cleaner section in Bridgeport, succeeds Mr. Hertzler as specialist in Philadelphia.

### Nilsson Opens First Kitchen Planning Department In Grand Rapids

By Robert M. Price

GRAND RAPIDS, Mich.—First appliance concern to have a complete kitchen planning department here is Nilsson Distributing Co., Hotpoint distributor, and the service is now being offered to dealers in the territory.

The planning department is housed in the main building of the company, and forms part of the main display floor. This display room is large and of unique design, heavy ceiling beams and open fireplace giving it an attractive homelike atmosphere. Just off the main display floor is the new all-electric kitchen used for display and demonstration purposes for prospects. The kitchen is recessed, giving it the appearance of a kitchen in a home.

A drafting room is on the opposite side of the building and is fitted out to do a complete planning job on any type of modern kitchen. A draftsman and design expert, Peter Prins, is in charge of this department. Although the service has been made available only recently, four kitchens have already been installed, and 12 more are now in the process of planning, according to Walter Nilsson, distributorship head.

All dealers served by the firm may avail themselves of the kitchen planning service, and, as it is the only service available in the territory, many other dealers are calling

on this distributor for expert aid in laying out new all-electric kitchens.

Addition of this service has brought immediate advantages, says Mr. Nilsson. Prospects who are considering putting in a planned kitchen in a new home, or who are thinking of improving their old kitchens, may come right to this distributor's combined display floor and planning department and iron out all details with the designer. This obviates sending plans away to planning departments maintained by manufacturers. Very often it is necessary to send kitchen plans back and forth many times before all concerned are satisfied, Mr. Nilsson said, and the delay is very often costly.

Estimated costs can be revised and settled between prospect and the Nilsson firm, and slight—but immediate—changes in specifications and costs very often clinch the sale.

### Leonard Registers 335% Sales Gain In June

DETROIT—Continuing their gains over comparable 1938 marks for the fifth consecutive month, factory shipments of Leonard refrigerators during June rose 335% above those in the same month last year, reports Ray Legg, general sales manager.

### Warren-Norge Awarded 5,710 Unit Contract In New York City

NEW YORK CITY—A total of 5,710 Norge refrigerators of 4 or 6-cu. ft. capacity are being installed by the New York City Housing Authority in two huge apartment house projects now under construction in the metropolitan New York area by the U. S. Housing Authority.

Certainly one of the biggest low-cost apartment programs ever undertaken with the aid of the U. S. Government, these developments drew bids from many major manufacturers of electric refrigerators. After consideration of these offers, the contract was awarded to Warren-Norge Co., Inc., Norge distributor here.

#### RED HOOK PROJECT

The Red Hook project, being erected in Brooklyn on a spot overlooking the East river near Governor's Island, will contain 2,545 apartments ranging in size from three to five rooms. The Queensbridge development, being built on what was formerly vacant land near the entrance of the Queensborough bridge over the East river, will consist of 3,165 apartments.

Every apartment in both projects will have cross ventilation and a view of a well landscaped garden, and all will be up-to-date in every detail. First apartments are scheduled for occupancy sometime this month, and both construction jobs are to be completed by the end of the year. Rentals in both the Red Hook and Queensbridge developments will be low enough to attract even the small income family, it is reported.

#### OTHER MASS INSTALLATIONS

Norge refrigerators also are being used in a number of other big apartment construction programs in the New York area. Number of apartments in these buildings range from 80 to 500, and rentals run as high as \$35 per room.

Partial list of these developments follows: Woodside Village Apartments, now under construction on a 9-acre park bordering the Rippowam river near Stamford, Conn.; Hastings-on-Hudson apartment buildings, nearing completion at Hastings-on-Hudson, N. Y.; Garden Housing apartments in Jackson Heights; Thornycroft apartments in Forest Hills, L. I.; Larchmont Acres, a beautifully landscaped group of buildings near Larchmont, N. Y.; and the Park Terrace Garden apartments being erected in Upper Manhattan.

What's New  
in Space  
Heaters?

NEW EXCLUSIVE DOWN-DRAFT  
WHIRLATOR  
NEW EXCLUSIVE "L" TYPE HEAT  
EXCHANGER  
NEW EXCLUSIVE TRIPLE-ACTION  
SYNCHRO-CONTROL

## THE 1940 NORGE FASTEMP HOME HEATER



### ... AND NEW PROFIT OPPORTUNITIES!

THE new 1940 Fastemp Home Heater is the outstanding oil-burning heater of the year... outstanding in over-all design... outstanding in rich and lasting finish... outstanding in mechanical features... outstanding in new and bigger profit opportunities.

**New Exclusive Down-Draft Whirlator**—Feeds oxygen-laden air to the center of flame... assures thorough burning of fuel... more intensive heat... cleaner burning flame.

**New Exclusive "L" Type Heat Exchanger**—45% more heat-delivering surface assures maximum use of heat generated, with minimum heat loss out the chimney.

**New Exclusive Triple-Action Synchro-Control**—Single dial control scientifically synchronized, controls oil flow, air flow and flue draft, assuring perfect fuel combustion.

The Fastemp delivers more heat. A forced-air blower that may be installed instantly... no fit-

ting... no bolting... directs 30% to 40% of heat through ducts to as many as four additional rooms and also circulates air on hot summer days.

The new Norge Fastemp Home Heater, made in three sizes, with these "double-barrelled" exclusive sales-clinching features, plus the prestige of the name NORGE, will be the "hot" line for greater heater profits this fall and winter.

INCREASE YOUR SALES VOLUME AND PROFITS WITH THE COMPLETE NORGE LINE OF HOME APPLIANCES

REFRIGERATION  
Norge offers the most advanced deluxe refrigerators at popular prices.

RANGES... Norge Gas and Electric ranges at prices to fit all family budgets.

LAUNDRY EQUIPMENT  
Steri-Seal Washers... Duotrol Ironers.

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Easier for you to sell, because they're easier for your customers to buy—that's the story behind Copeland! Lower prices, smaller down payment, easier terms... selling arguments that mean sales and profits for you! Copeland engineering skill and versatile designing have produced a line of refrigerators to fit any need. Write TODAY for complete information!

COPELAND REFRIGERATION CORPORATION, Sidney, Ohio

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NORGE DIVISION—Borg-Warner Corporation, Detroit, Michigan



## AIR CONDITIONING & REFRIGERATION NEWS

Trade Mark registered U. S. Patent Office;  
Established 1926 and registered as  
Electric Refrigeration News

Published Every Wednesday by  
BUSINESS NEWS PUBLISHING CO.  
5229 Cass Ave., Detroit, Mich.  
Telephone Columbia 4242

Subscription Rates  
U. S. and Possessions, Canada, and all  
countries in the Pan-American Postal  
Union: \$4.00 per year; 2 years for \$7.00.  
All other foreign countries: \$6.00 per year.  
Single copy price, 20 cents. Ten or more  
copies, 15 cents each; 50 or more copies,  
10 cents each. Send remittance with order.

F. M. COCKRELL, Publisher

GEORGE F. TAUBENECK, Editor  
PHIL B. REDEKER, Managing Editor  
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Staff Reporters: JAMES MCALLUM,  
ALFRED JONES, HENRY KNOWLTON, JR.,  
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VOL. 27, No. 13, SERIAL No. 540  
JULY 26, 1939

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## Magna Charta of Appliance Dealers

SAN DIEGO, Calif., has long been known as a spot where competition was exceedingly keen between appliance dealers, but where even the cagiest of competitors are gentlemen who get together amicably around a conference table and settle their differences when such action seems advisable.

Recent action of the Bureau of Radio and Electrical Appliances of San Diego county in drawing up a broad program of suggested trade selling practices follows through along the lines of previous conceptions of enlightened thinking in that thriving California city.

### Combines Best Features of All Programs—With Philosophy

This program combines so many of the best features of other cooperative programs, and elucidates the philosophy of cooperative practices among appliance dealers so well, that some are already calling it "a blue print for the Magna Charta of appliance selling."

Take, for example, the preamble:

"AGREED, that it is, and should continue to be, the aim of all appliance dealers to consistently make a reasonable profit by using business methods that in no way take unfair advantage of a competitor, the purchaser, or the industry as a whole.

"AGREED, that individually we should strive to develop business by strengthening our own organizations, rather than by tearing down the structure of competitive organizations.

"AGREED, that we should hold our competitors in high regard and should strive to build such confidence in them that we may not be misled by our customers, who, through misstatements, attempt to gain unfair advantage to themselves."

### Cut-Throat Competition No Longer Hilarious Pastime

In the earlier and wilder days, appliance selling—and especially refrigerator selling—was a helluva lot of fun. Beating your competitor was part of that fun. Dealers took sales away from one another just for the laughs, or for the feeling of triumph, even if they didn't make any money at it. But that was when sales were

easier, when they could be "plucked off trees." Refrigerator selling has settled down a bit since then; sales are more difficult to make; and it is even more difficult to earn profits on those sales.

Hence the fun of snaking a sale from underneath a competitor's nostrils is a pretty expensive pastime, especially in view of the fact that said competitor may be so desperate for business he'll go you two steps further.

### Customers Now Play Too Skillfully For Comfort

And the big point is that customers—having learned about contests and quotas and the joys of competition—have been playing dealers against one another and making suckers out of all, a situation succinctly outlined in the third paragraph of the preamble.

Take the matter of financing. There are as many ways of stating terms as there are of defining "liberalism." Finagling on time payment terms has become the popular new indoor game among the price cutters.

### Last Word on Folly Of Selling Terms

It would seem difficult to draw up any kind of resolution which could cover all the variations of terms selling which the chisellers can dream up. But the San Diego Bureau handles it simply and neatly:

"AGREED, that 'no money down' and 'no carrying charge' advertising has a value only in the proportion that others refrain from such advertising, and that if used by all, would be detrimental to the industry on which we depend for a livelihood. Therefore, it is recommended that such advertising be discontinued.

"AGREED, that greater effort should be spent in selling the 'need' for and the 'features' of a given appliance, and less effort in selling 'terms.'

"AGREED, that the practice of giving customers a detailed comparison of various competitive financing plans tends to confuse them and often creates distrust of financing plans in general. Such practices should be discontinued in the interest of good business."

### Trade-In Refrigerators

#### Provided For In Detail

Used refrigerators, too, are handled frankly and in detail, as follows:

"AGREED, that the maximum allowance given for wood ice boxes on the sale of new refrigerators shall not exceed \$3.

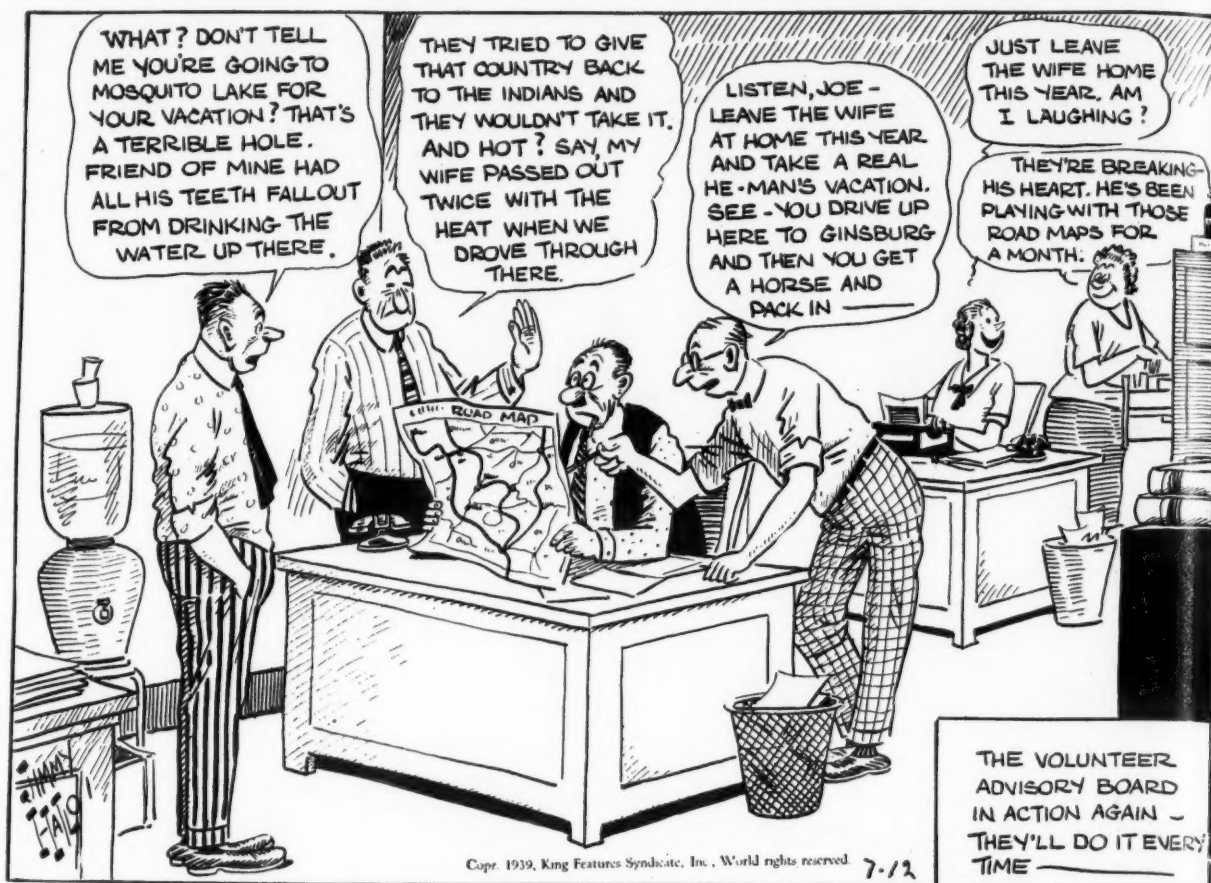
"AGREED, that the use of expression 'thoroughly overhauled' in connection with used mechanical refrigerators, should only be employed in the rare instances where such has actually been the case. It is recommended that a uniform policy of used refrigerator warranty be adopted, as follows: On sales less than \$50, no warranty on parts, 30 days labor service, and 30 days exchange privilege on new merchandise. On sales of \$50 to \$100, 30 days warranty on parts, 90 days labor service, and 30 days exchange privilege. On sales of \$100 or more, 90 days warranty on parts, one year labor service, and 30 days exchange privilege."

In connection with appraisals of trade-ins, a "market index" of values is recommended, plus a scale of allowances.

Premiums and trading stamps are disapproved, as is retail selling by wholesalers. On this latter subject, the language is pretty sharp:

"AGREED, that the matter of wholesalers selling at wholesale to those not legitimately in a business entitling them to such discount is one of the worst evils of the appliance business, and should be discontinued."

## They'll Do It Every Time . . . By Jimmie Hatlo



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### Perusal of Entire Text Recommended To All Dealers

Perusal of the entire text of this agreement (published in full in the July 19 issue of AIR CONDITIONING & REFRIGERATION NEWS) is recommended to dealer bodies everywhere, and to individual dealers in those communities where associations have not yet been formed.

Competition is the life of specialty selling; but when pell-mell competitive practices become merely the lever by which crafty consumers can pry profitless price quotations from harassed dealers, these practices need re-examination.

The big job of cooperative dealer organizations today is not to protect dealers from one another, but from their prospects.

## LETTERS

### Use Dry Ice In Your Car and Wake Up With P.T. Barnum

Dayton, Ohio  
July 20, 1939

Editor:

This is reply to your "Dry Ice" photo and news article on page 11, July 19 issue.

The writer while on the West Coast in 1936, made a contract with a dry ice plant for 2 tons of dry ice per day to be delivered to El Centro, Calif., and Yuma, Phoenix, and Tucson, Ariz.

Signs were erected on all main highways to attract tourists. "KEEP COOL WITH DRY ICE—CROSS THE DESERT IN COMFORT." Many tons were sold; many users swore by it—a real study was made.

To make a long story short, I got out of the business simply because—Oh, it was a good deal like—drinking liquor—you built yourself up—and up—but way down deep in you—you knew it was all a false exhilaration, a mental hoax.

I saw tourists with babies—suffering with rash and heat and mothers, like a drowning man, grasping at a straw—anything—just anything to bring relief. When temperatures soar to 115 to 130° F.—you or anybody else would pay a dollar for something cold—if it was the last thing cold you could purchase.

Dry ice is a conductor, and not a refrigerant. I know that you know that, and so does anyone else, who is honest with themselves. We did, however, successfully refrigerate meat trucks by cutting an opening in the top and inserting an aluminum box so that the dry ice could conduct its 109° below zero ability to cool, into the compartment, with the result, that today that is the system used for transporting meat through the desert country.

But, my friends, never let anyone kid themselves that a 10-cent soap dish and a dime's worth of dry ice, will, like a magician, circulate its fumes, against all the laws of nature, and give you air conditioning or a cool room.

Hey, Grimes, bring that soap dish out of the bathroom—run over to the ice cream plant and get me a dime's worth of dry ice, and say unpack those blankets, turn off the air conditioning, bring out the 98-cent fan for circulation. I'm going to sleep and say, close the windows tight so I can wake up with Barnum.

Excuse please.

E. G. SANDERS

Answer: We find Mr. Sanders' Arizona lingo somewhat hard to understand. Can some reader explain the effects of Dry Ice more clearly?

### TVA Publicity Man Upholds His Bosses

Tennessee Valley Authority  
Knoxville, Tenn.

Editor:

I have just read your editorial, "Looking at TVA Sensibly," in your issue of June 28, 1939. A good many of the charges in your editorial are reminiscent of those current a year or so ago, before they were investigated and exploded by a Joint Congressional Committee. For your information, I am enclosing a copy of the summary of the findings of the committee.

However, there are two points in your editorial which I feel call for comment. Beginning with your second paragraph, you say:

"Impatient David Lillenthal forced manufacturers into manufacturing the biggest dud of their collective careers—the 'chest model'—by threatening to put TVA into the manufacturing business. EH&FA caused the enfranchisement of hundreds of shoe-string dealers who made it tough for other dealers, and finally went out of business. And the forced utility merchandising which followed put many more dealers—subscribers to the News—on the skids."

"TVA Has Been Headache To Appliance Industry"

"From the standpoint of the industry, TVA was a headache."

This recalls an editorial statement of almost identical import which you made a year and a half ago, in your Feb. 9, 1938, issue:

Then came the TVA and the same story all over again. From that territory subscribers wrote in to say that their appliance business was being shot to hellangone by the operations of the EH&FA and TVA.

When we registered an objection to this statement, your defense was that "our quarrel is not with the TVA methods of the present but of the past. We did not say that in that area the appliance business is being 'shot to hellangone,' but was being 'shot to hellangone.'" In the reply printed in your magazine, however, you skipped this point.

I would like to suggest that if you insist on shadow-boxing with the problems of five years ago, you might make the fact clear to your readers.

It would be interesting if you could produce evidence that "TVA Has Been Headache to Appliance Industry." As you will see from the enclosed release of March 2, 1939, residential consumers of TVA power during 1938 purchased more than \$2,000,000 worth of electrical appliances. The figures

were compiled from reports of some 400 private appliance dealers, the majority of whom became established since 1933 and are still in business. Moreover, residential customers of several large utilities in the area have practically doubled their consumption of electricity, i.e., use of appliances, since 1933. I wish you would explain how such an expansion has put the skids under appliance dealers.

The second passage calling for comment is as follows:

"TVA started out as a flood control project which coincidentally would furnish power to private power customers, and serve as a 'yardstick' on rates. It soon developed into a paternalistic movement which was out to destroy the public utilities (first in that section, later elsewhere throughout the country).

"It was demonstrated that when flood control interfered with power production, flood control was neglected."

I am enclosing a copy of the TVA Act, under which the activities of the Authority are carried on. Briefly, the Authority is empowered to construct projects for the improvement of navigation and the control of flood waters and is directed to operate these projects "primarily for the purposes of promoting navigation and controlling floods." "So far as is consistent with such purposes," TVA is authorized to produce and sell power.

The Authority has carried out the purposes of the Act as directed. The requirements of flood control have not been sacrificed to power production, and your statement to the contrary is not based upon fact. You cannot produce an iota of credible evidence "demonstrating" any such distortion of the purposes of the Act.

W. L. STURDEVANT,  
Director of Information  
Answer: Our editorials on the TVA have dealt with that smelly subject mainly from the viewpoint of the refrigeration industry. Significantly, no dealer, distributor, or manufacturer, in the TVA area or elsewhere, has indicated any disagreement with the editorials.

We are not impressed by the quibbling of a hired propagandist whose job is to curb adverse criticism.

### Serves the Industry In All Its Phases

Kelvinator of Canada, Ltd.  
London, Ont.

Editor:

It was indeed very nice of you to write us in connection with our recent promotional announcement by "blown-up" telegram.

That you considered this "sales trend" of Kelvinator in Canada of sufficient news value to be given front page space in your informative and valued publication is something we highly appreciate.

The News is always looked forward to by the writer with considerable interest. Having been associated with Kelvinator in Canada since 1926, I think I must be numbered among your first Canadian subscribers, and have regularly observed within this period, the rapid and progressive development of your publication.

It's all that its name implies—a "newsy" weekly, serving the industry in all of its various phases of Merchandising, Engineering, Installation, and Service, in a most comprehensive and intelligent way.

J. S. BLAY, General Sales Manager



## Finance Companies' New Plans First Break From 30-Month Limit In Nearly 2 Years

(Concluded from Page 1, Column 5)  
Boosts "Penny Selling" the bulletin states:

"GOOD NEWS! Westinghouse and C.I.T. have announced the extension of limits on time payment contracts from 30 to 36 months. Here is the added power to push summer sales to a new peak. Good news, indeed."

But C. C. Strang, assistant to Vice President John W. Darr of C.I.T.'s headquarters staff in New York City, gives the following explanation of his company's policy:

"C.I.T. has agreed to take an occasional deal on refrigerators running over 30 months. We are calling this a policy of 'making exceptions.'"

"In our schedules of terms for financing which we send to dealers, the maximum time payment period specified is still 30 months. However, the point is also made that 'here and there, where warranted to meet competition, terms up to 36 months will be granted.'"

### POLICIES EXPLAINED

No official statement of policy from the Commercial Credit Co. had reached the NEWS at the time this issue went to press, but an official in one of the firm's local offices declared that "30 months is the limit set up on our schedules, but in 'exceptional' cases where requested by the dealer we may go to 36 months."

At the offices of General Motors Acceptance Corp. (GMAC) which discounts most of the paper on Frigidaire sales, it was stated that the 30 months' maximum was still in effect, with no deviations from the maximum permitted.

Refrigeration Discount Corp. (ReDisCo) which furnishes financing facilities for Kelvinator dealers, has issued a "supplementary deferred payment chart" which extends terms to 36 months. This applies only to refrigerator sales, on which the dealer must secure a minimum down payment of 10% of the cash installed price. On sales restricted to 30 months' time ReDisCo will accept contracts showing only a 5% down payment, and on 24 months' contracts will take paper with no down payment whatever.

### REDISCO OPPOSES IT

With its announcement on a 36 months' plan, ReDisCo has issued a bulletin which makes it clear that ReDisCo thinks that the extension past 30 months' time is bad business. The following is the complete text of the bulletin:

"Recently a few finance companies have released announcements of their willingness to accept refrigerator contracts with payments extending over a period of 36 months. Only a few dealers so far have inquired if we are going to meet this competition."

"There is no question of our ability to meet this competition. As a matter of fact, we know of no law that would prevent us from extending 72 months' time. Neither is it illegal for you to place your endorsement on the back of such paper. But is it good business?"

"The opinion has been expressed that 36 months will bring the payments down more nearly in keeping with the purchaser's ability to pay."

"Is this borne out by the facts? A contract with an unpaid balance of \$150 will pay out in 30 months at the rate of \$6 per month. These payments can be reduced only 85 cents per month by stretching the contract to 36 months which, in turn, increases the financing charge approximately 18%. And even then you cannot know definitely that you

have extended terms in keeping with the purchaser's ability to pay."

"We submit that if the risk is sound and your customer has been properly sold, then 24 months should be ample time in which to permit convenient liquidation of the obligation in practically all cases. This, in turn, means a more rapid accumulation of equity for your protection on repossessions, which result more often from economic causes than from unsound credit."

"Why do we present this argument despite the fact that 36-month paper will increase our revenue? It's simply this—volume secured through the sale of terms too often leads to abuses which adversely affect the profits of the dealer. Follow the lines of least resistance in any enterprise, without regard for sound business practices and a false prosperity will be apparent, but only for a limited time. High pressure the market before that market is ready to buy and losses are invited during the subsequent leveling off process, with which you are all familiar."

### SHORTER TERMS, MORE PROFIT

"Please do not misunderstand us. We do not predict ruin for a dealer selling on 36-month terms. We do believe, however, that the practice has been, and can be, abused. We believe definitely that a satisfactory volume of business can be secured without the use of 36-month terms. And finally, we believe that the dealer restricting his sales to the shortest terms possible will ultimately show the greatest profit."

"Irrespective of the above, you may wish to place yourselves in a competitive position, even though you have no desire to sell on 36-month terms. For this purpose we have prepared a supplementary Deferred Payment Chart which extends to 36 months, and a supply will be sent you upon receipt of your request."

"This applies only to refrigerator sales, on which you must secure a minimum down payment of 10% of the cash installed price. On sales restricted to 30 months' time we will accept contracts showing only a 5% down payment. On sales written to mature in 24 payments we will accept the contracts even though you have secured no down payment whatever."

"We caution you in the use of the maximum terms as a basis for any sales campaign. Also avoid the unrestricted use of maximum terms in the hands of salesmen. Even though we make such excessively liberal terms available, we certainly wish to avoid the possibility of injury to your ultimate welfare."

### "SELL YOUR PRODUCT

and as for terms

LET THE PURCHASER WRITE HIS OWN TICKET."

The movement to establish a 30 months' maximum two years ago was led by such groups as the National Retail Credit Association, National Retail Dry Goods Association, National Retail Furniture Association, and other organizations. It was stated at the time that the experiences during the period of easy FHA terms on refrigerators had helped the "fly-by-night" and injured the established dealer."

### WHAT IS AVERAGE NOW?

No published figures seem available on the average length of time refrigerator time payment contracts have run during the past two years.

Mr. Strang of C.I.T. declares that his company occasionally makes a "sampling" survey of a number of contracts, and that this generally shows that the time taken to pay is

close to the maximum period granted. In the case of refrigerators, he believes it has been around 27 months on the average."

At the local office of another finance company an opposite view was given, the official (who would not allow himself to be quoted directly) declaring that the average period was closer to 24 months, stating that the dealers themselves had more or less adopted a 24-month maximum."

"Dealers don't like the longer terms," this man stated, "because it takes the owner that much longer to pay off and be in the market for another appliance."

## Latest Dodge of Bookies Is Appliance Store 'Front'

(Concluded from Page 1, Column 3)

being seen. Soon an electrical buzzer was heard, the lock on the inner door clicked, and the door swung open. Two rather rough-appearing individuals emerged from the inner recesses, left the "store," and proceeded up the street mumbling damning phrases about such things as six-horse parlays and track odds.

Another call to Lieut. McCarthy, this time with the reporter playing the part of the informer, brought forth an expression combining bewilderment and righteous determination. "Open again? I can't understand it," replied the law.

Latest news flash . . . the joint is still open.

## Carrier Signs Up For Exhibit Space At Second All-Industry Show Next January



Mark Mooney (right) of Carrier Corp. signs up for the spaces that Carrier will occupy at the Second All-Industry Refrigeration and Air Conditioning Exhibition next January.

With him in the picture is M. W. Knight, general sales manager, Peerless of America, Inc., and chairman of the all-industry show, who reports that following a special meeting July 21 of the exhibition committee, the print order for all promotional material for the show has been increased by 50%, since it is evident already that there will be a 50% increase in the number of exhibitors over the '39 show.

Except for the stationery stickers

used last year all other mailing pieces, posters, and exhibitors' mailing pieces are to be redesigned, says Mr. Knight. The promotion program will begin in September. It was also decided to provide larger badges than those used last year—badges large enough to make it possible to use large lettering for the names of registrants.

Present at the meeting, in addition to Chairman Knight, were Committee-men F. J. Hood, secretary of the Ansul Chemical Co.; A. B. Schellenberg, president, Alco Valve Co.; K. B. Thorndike, western sales manager, Detroit Lubricator Co.; and R. M. McClure, secretary, Refrigeration Equipment Manufacturers Association.

... We try to be

# CONSTRUCTIVE

Advertising is destructive when it makes exaggerated claims—indulges in half truths—or tries to cast discredit upon anyone. Selling is destructive when it does likewise—when it employs price cutting tactics and promises more than can be profitably delivered. We are making every effort to build our business on a constructive basis and our advertising and sales policies are shaped accordingly.

**UNIVERSAL**  
DETROIT, MICHIGAN

**COOLER CORP.**  
BRANTFORD, ONTARIO



The policies expressed in the above advertisement published seven years ago are in no small measure responsible for the progress of this company. These same policies are being followed today.

## Guaranteed Pure and Dry . . .



# Artic

The Preferred METHYL CHLORIDE for Service Work

PROMPT SHIPMENTS From Stock Points • COAST-TO-COAST Distribution



E. I. DU PONT DE NEMOURS & CO., INC.

The R. & H. Chemicals Dept.  
Wilmington, Delaware

District Sales Offices: Baltimore, Boston, Charlotte, Chicago, Cleveland, Kansas City, Newark, New York, Philadelphia, Pittsburgh, San Francisco



# Developments In Equipment Widen Market For Bottling Plant Refrigeration

## Radical Design Used For New Cooler of Instantaneous Type

CHICAGO—Incorporating what is claimed to be an entirely new principle in methods employed to provide cooled water for carbonated beverage manufacture, the "Red Diamond" water refrigerating unit has just been introduced by the Liquid Carbonic Corp.

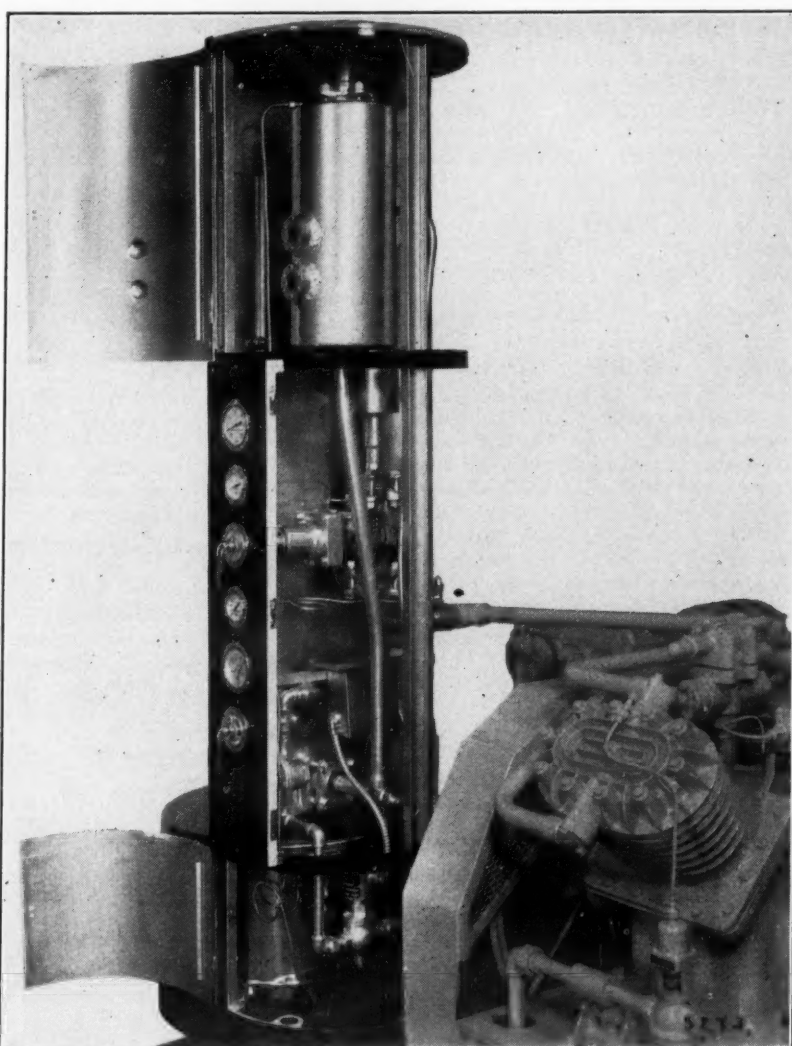
Liquid Carbonic Corp. officials see its extension to other fields where rapid quantity refrigeration of liquids at a relatively high temperature differential is an important factor.

Construction of the new unit, on which the new principle revolves, is an upright, cylindrical-shaped double-tube evaporator, the space between the two tubes or cylinders being filled with liquid refrigerant. The water trickles down over both the outside and inside surfaces of the double-walled tube and is chilled almost instantaneously, the manufacturer claims.

### HOW COOLING IS DONE

Water to be cooled flows through an inlet pipe at the bottom of the unit, passing through a water pressure regulator, a metering valve, and into a distributing cup on top of the

## For Water Chilling Operations



Controls side of the 200-gallon, 85 to 35° F. "Red Diamond" water chilling unit just introduced by Liquid Carbonic Corp. Dials show evaporator suction pressure, compressor suction pressure, head pressure, and water temperature. The two manual controls are the temperature regulating valve and the water flow regulating valve.

evaporator. Here it is broken into two thin films and allowed to flow down along the inner and outer refrigerating surfaces of the cylindrical evaporator.

The refrigerant is introduced into the evaporator at a high velocity, which induces continuous and rapid circulation of the liquid refrigerant through the 5-foot-high evaporator. Pressure drop in the evaporator is said to be negligible, since the unit functions as a flooded system, and the gas bubbles to the top of the evaporator and passes over into the surge drum or accumulator with minimum restriction.

At the bottom of the unit the refrigerated water flows into a cork-insulated, stainless steel, cold water tank, providing an adequate supply as required by the carbonator.

### REGULATORS USED

Other features claimed for this new water-cooling plant are: The refrigerant injector has a fixed orifice requiring no adjustments; also a

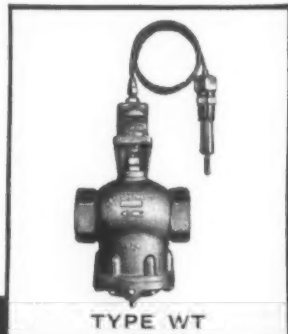
back pressure regulator for maintaining any given suction pressure.

All parts of the unit are compactly assembled in one housing.

Water level in the cold storage tank is controlled electrically, not by a float. Water level control and temperature control are fully automatic, and regulate the operation of the water solenoid valve and condensing unit. Once the unit is set for the desired water temperature coming off the cooling tube, it will continue to supply water at this temperature without further adjustment.

The unit may be easily cleaned, since the hollow, cylindrical evaporator may be exposed by removing an outer cover or shell so that both the inside and outside surfaces can be scrubbed.

The "Red Diamond" units are available in capacities of 100 to 1,000 homes under construction, and many gallons per hour, the evaporator height being the same in all models, but the number of evaporators varying with the capacity.



## Electromatic TEMPERATURE ACTUATED VALVES

For Water, brine, etc.

Full opening and tight-closing.

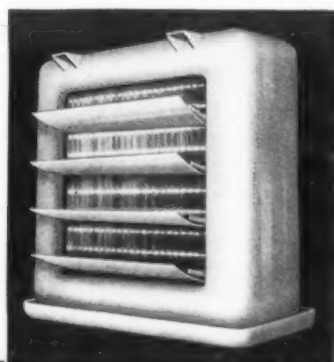
Wide adjustability. Close control.

Ranges available from -20° to +180° F.

THE ELECTROMATIC CORPORATION  
2100 INDIANA AVE., CHICAGO, ILL.

## For Product Cooling . .

# MARLO UNIT COOLERS



Designed especially for Walk-in Refrigerators, 34 degrees and over, these Units can also be used for Air Conditioning.

The Coil Cores in Marlo Unit Coolers are Headered, and the Tubing proportioned in Circuits that eliminates any short circuiting of the Refrigerants and insures an even Coil temperature.

Housings are made of Aluminum two-piece Castings.

Fan Motor, Fan and Coil Cores are easily removed for inspection if necessary.

All Marlo Unit Coolers are conservatively rated.

Send for Bulletin No. 393 containing complete details.

MARLO COIL CO., 6135 Manchester Ave., St. Louis, Mo.  
Canada and British Isles: Universal Cooler Co., Brantford, Ont.  
Manufacturers of Complete Line of Low Side Equipment

(W-2)

## Dealer Specializes In Water Chilling and Designs a Cooler To Operate At Low Cost

BIRMINGHAM, Ala.—Few refrigeration dealers or contractors have compiled anything like the record of Smith & Berry, Birmingham firm, in the sales and installation of water cooling equipment for industrial purposes, particularly bottling plants.

The record made by the refrigeration dealership and engineering firm demonstrates what can be done by giving special attention and study to one particular type of application, while handling all the regular and routine commercial refrigeration business that comes along.

The firm has made a special study of the water cooling problem of the bottler of carbonated beverages, because there are more good prospects for water cooling among bottlers, and because water cooling is a major problem with them, for the reason that water used in their plants must be cooled and held at specific temperatures if they are to turn out a drink of uniform carbonation.

### NEED IN BOTTLING PLANTS

The bottler must not only cool his water to a uniformly low temperature, but must do it as economically as possible. About 83% of the contents of a soft drink is water, so that water costs are considerable, this being particularly true with the advent of the 12-ounce or "knee high" bottle which still retails for 5 cents.

Prospects for the sale of water cooling systems are obtained by various means, explains William T. Smith, partner in the firm with Joseph A. Berry. The company enters exhibits at bottlers' conventions. Lists of bottlers are obtained from state associations. Close contact is maintained with syrup salesmen and others who in the course of their duties call regularly upon bottlers.

Mr. Smith and his salesmen carry along testimonials and recommenda-

tions, not only from other bottlers, but from bankers and other business men whose names carry weight. Mr. Smith, an amateur photographer of note, makes use of his hobby to provide a portfolio of pictures of like installations.

### PICTURES HELP SELL

"Nothing can be more convincing to a bottler than to see pictures of an installation made in the plant of a bottler whom the prospect knows personally," declares Mr. Smith.

After this "buildup" work has been done to establish the firm as reliable specialists in water cooling, the salesman is ready to go into the bottler's particular water-cooling problems. Naturally, about the first thing the bottler wants to know is the cost of the cooler, but this cannot be given until the size of the equipment needed can be determined.

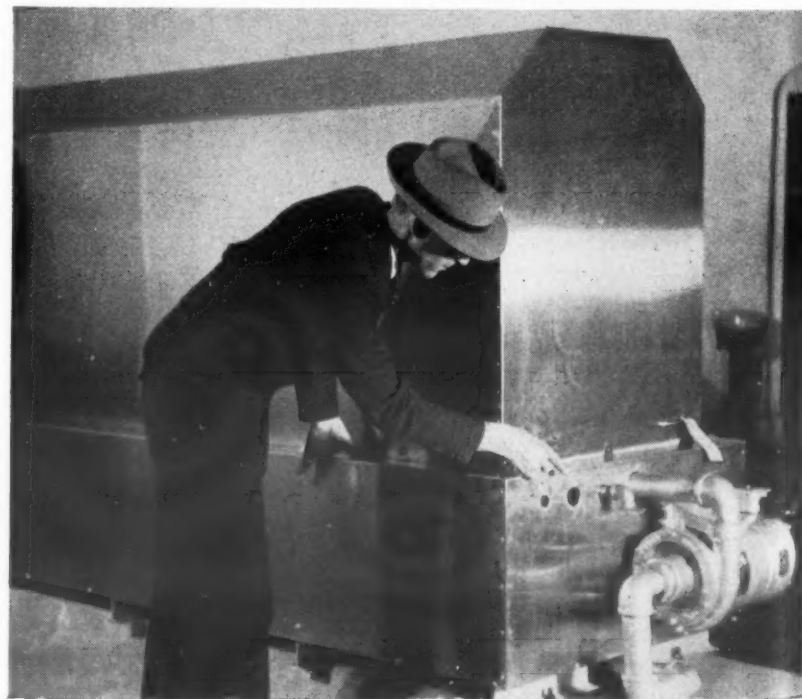
Thus, the salesman must obtain information from the bottler as to how much water he uses, and to what temperatures it must be cooled. If the bottler cannot give this figure offhand, it can be figured from the number of bottles filled per hour or per day. Generally, it is desired to cool the water to or near the freezing point and maintain it there during carbonation, and the filling and capping process.

The company has its own special design of cooler for bottling plant installations, which Mr. Smith describes as follows:

### HOW THE COOLER WORKS

"In our coolers, which employ the Frick 'Zig Zag' coil, the coil is operated flooded because of the installation of a float accumulator mounted directly above the coil. The refrigerant is caused to flow within the coil somewhat like the water in a coffee percolator through an ingenious arrangement of the liquid and suction connections between the accumulator, float valve, and 'Zig Zag' coil.

## Mr. Smith and His Cooler



W. T. Smith of the firm of Smith & Berry, Birmingham, Ala., refrigeration dealer and engineering concern, points to the water pump which is mounted integrally on the cooler which he has designed for use in bottling plants and applications requiring large amounts of chilled water.

"Thus, at one and the same time we get the benefit of the usual efficiency of the 'Zig Zag' coil and full-flooded ammonia operation as well as forced circulation of liquid ammonia, resulting in the inside of the coil being at all times wetted with boiling liquid ammonia.

"Operation at high suction pressure results in corresponding economy of operation. For example, a certain size refrigerating machine will have a net refrigerant capacity of 2.9 tons refrigerating effect at 10 lbs. suction pressure with a total horsepower requirement of 5.9, making a net horsepower per ton of 2.03. But if a scheme can be devised to permit

(Concluded on Page 13, Column 1)

## HOW TO Satisfy MRS. REFRIGERATOR OWNER:

Is she saying to her friends, "I'm not really satisfied with my refrigerator...It's guaranteed, but I had trouble..."

You can't tell HER the unit is mechanically perfect. She'll never understand your explanation that trouble occurs in a certain number of cases because the most careful baking and assembly at the factory don't get quite all moisture out of the intricate passages. Valves mean nothing to her.

Satisfy her by preventing trouble. A cartridge of Activated Alumina, built permanently into the unit, traps and holds moisture, preventing valve trouble. Activated Alumina is proved dependable, by successful, permanent cartridges installed on certain makes. Why not put cartridges on your unit, as inexpensive protection against loss of good will? ALUMINUM ORE COMPANY. (Sales Agent: ALUMINUM COMPANY OF AMERICA, 1908 Gulf Building, Pittsburgh, Pennsylvania.)



## ACTIVATED ALUMINA

PREVENTS CLOGGED REFRIGERATOR VALVES



## Service News

### Dealer Has Own Unit For Water Chilling Applications

(Concluded from Page 12, Column 5)

the operation of this compressor at 45 lbs. suction pressure it will provide a capacity of 7½ tons of refrigerating effect with a horsepower requirement of only 7.9, resulting in a net horsepower per ton of only 1.05.

"Net result is that we can use a refrigerant temperature of as high as 30° F. and still cool the water to the freezing point. A pressure switch maintains the suction pressure at or near the 45 lbs. desired. It would not be possible to operate at such efficiency without careful designing of water circulation and full flooded operation.

#### DESIGN OWN CABINET, TOO

"When we first became interested in the bottlers' problem," continued Mr. Smith, "we promoted only the refrigerating system, leaving the customer to obtain his water tank elsewhere. But for the best operating conditions, we saw the need for a uniform tank or cabinet, one which would meet rigid sanitary requirements.

"Since every piece of equipment used by a bottler must be easy to keep clean, we consulted with chemists, both independent and those connected with bottlers, as to the best materials to be used. Consensus was that it is absolutely necessary to use materials which have been heavily galvanized to obtain a chemically pure water. Tinned copper, Monel metal, or stainless steel may be used if desired for appearance, but they do not add to the purity of the product handled, as galvanized steel used in both the coils and in the cabinet give the best results.

"The lower or tank portion of our cooler is constructed of either plain steel lined with tinned copper, or of stainless steel, as the customer may desire. The hood is constructed of either galvanized iron or of stainless steel, and a feature is the ease with which the hood may be removed for cleaning, or adjustments to equipment. Insulation is 3-inch corkboard.

#### TYPE OF PUMP

"Circulating pump for the water cooler is of the unit type, mounted integrally with the cabinet and requiring little attention. A pump is selected with the capacity to circulate the necessary number of gallons per minute over the coils in order to maintain the water temperature at near freezing.

The cooler will operate an estimated 70% of the time in hot weather and 35 to 40% of the time in cooler weather."

#### Handbook on 'Drives'

PASSAIC, N. J.—A new engineering data book for machine designers and engineers designing V-belt drives has been issued by Manhattan Rubber Mfg. Co. First part of the book covers standard drives, eliminating the necessity of working out calculations; and the second part covers sheave factors for designing new or special drives. Also included are belt comparison tables and other general information.

#### Information on Brine

NEW YORK CITY—"Corrosion in the Refrigeration Industry," a booklet dealing with the use of chromium chemicals as corrosion inhibitors, has recently been issued by Mutual Chemical Co. of America.

The booklet is an attempt to condense and present in non-technical language the best information currently available on the subject, and covers such topics as the chromate treatment of brine, brine testing, treating brine, alkalinity, testing for ammonia, preparing new brine, maintaining the chromate concentration, etc.

### New 'Plug In' Instrument Gives Electrical Data For Any Small Unit

NEW YORK CITY—A self-contained electrical testing instrument said to be capable of ascertaining the electrical characteristics of any electric refrigerating machine from ½ to ½-hp. capacity has been placed on the market by Keystone Laboratories.

No technical knowledge is necessary to operate the instrument, it is claimed, it being necessary only to plug in the refrigerator to the test box, and the test box into an electrical outlet. The instrument gives kilowatt, horsepower, and ampere readings at the press of a button.

Outer scale shows kilowatt consumption per month to operate the refrigerator under test, taking into consideration power factor, time cycle, etc., it is claimed, eliminating the need for a recording watt meter to measure this consumption. Center scale indicates current draw in amperes of motor; inner scale indicates the horsepower of the motor under test.

Use of this meter, it is claimed, will enable the service man to locate electrical troubles within a few seconds. Cost of the instrument, delivered, is \$15. Both a.c. and d.c. models are available.

### How To Order Parts For Refrigerators & Units

SAN FRANCISCO—By making sure that they include certain essential information when ordering replacement parts for household and commercial refrigerators and ice cream cabinet units, service men can save themselves considerable delay and their jobber's stock man considerable trouble, Clarence F. (Sandy) Pratt, head of California Refrigerator Co., points out in a recent issue of his "Cold Facts."

Information which Mr. Pratt suggests be included with all replacement parts orders includes: sample or full size drawing of the part wanted, if possible; horsepower of compressor; bore and stroke; important dimensions—inside, outside, and overall; mark bolt or screw head centers on drawing; give make of refrigerator and compressor; include age of model, refrigerant, and size of cabinet, if possible; copy motor name plate data; note if unit is air or water-cooled; if door hinges or latches are desired, send model or full size drawing.

Giving model number of the machine alone is often not sufficient, Mr. Pratt points out, since sometimes a model is changed in mid-year, and new parts are added. Detailed information often is not necessary when ordering parts for comparatively new machines, he says, but on older models the information is essential to speedy, accurate service on the jobber's part.

### Philco Offering Bonus on Servicemen Who Study

PHILADELPHIA—To spur acceptance of its recently launched radio and air conditioning-refrigeration training program, Philco is awarding a bonus of \$5 to its distributors' service managers for every course sold in their territories.

Details of the procedure and method of promoting this new educational plan have been sent to Philco service managers all over the country. The move was originated at the company's recent convention.

A bulletin covering service work and installation of York "Cool-Wave" room coolers also has been sent to distributors by Philco's service department. The data is divided into five subjects, including training dealers to install the units, floor demonstrations of the units, various relocation plans for getting the most efficiency, and other tips for dealers and service men.

## 'Phone Diagnoser' and Promoting Stores' Service Work Helps Oklahoma Dealer

By Robert M. Price

TULSA, Okla.—"As the service department goes, so go refrigerator sales." S. B. Williams, auditor of Dodge Electric Co., Norge dealer here, really believes that, for when the store increased the size and efficiency of its service department, business increased 100%.

The store now has a force of four topnotch service men; one, the service manager, sits all day at the telephone taking service calls. He knows the prices of all parts, and approximate costs of all service jobs. He has become so experienced in diagnosing service complaints that he can tell the customer just about what needs to be done, and the time and costs for the job.

This system has proved a time and money saver for the store, as it cuts down on service trips. The speed of the service has produced many a booster for the store.

#### HELPS USED BOX SALE

The improved service department has meant the difference between profit and loss on trade-ins, Mr. Williams claims. Used boxes are put in good running order, and advertising and the store's reputation for excellent reconditioned refrigerators provide a ready market.

It is the advertising policy of the store to offer good used boxes over "bargain-price duds." Many prospects for used boxes are sold up to

a new one, but if the prospect reveals that they are prepared to go "only so high," salesmen are instructed to concentrate on selling a good used box. These boxes are kept on the floor for ready demonstration to interested parties.

#### ADVERTISING STUNTS

As an advertising scheme to advertise the long life of its Norge refrigerators—and to emphasize the work of the service department—the store had on display in the window an 11-year-old box that had been reconditioned and was in perfect working order. The owner's certificate, stating when he bought the refrigerator and the service it gave, accompanied the exhibit.

This stunt worked two ways, getting prospects for new refrigerators and buyers for serviced boxes. This is one way, said Mr. Williams, in which the store's reputation for super-service has been spread. "It is a recognized fact," he said, "that many prospects come from satisfied users. Give your users quick and satisfactory service and watch your user-prospects increase. Ours certainly did."

#### CUTS PRICE-CUTTING

By better service, a dealer can successfully compete with the dealer whose only drawing card is cut prices and high trade-ins, Mr. Wil-

liams believes. Buying appliances from such a dealer is like buying good merchandise at a cut-rate drug store, he explained. If something goes wrong the buyer has no call-back, no one to look to for service. Many times these stores go out of business, leaving the buyer to find another store to take care of the service.

Mr. Williams believes that many buyers are coming at last to realize that a store's reputation for fair dealing, for standing squarely behind each sale, and for offering good service for the life of the appliance counts much more than a "better deal" at the time of purchase.

### Plant Spray Outfit Is Portable

CHICAGO—A streamlined portable paint spraying outfit incorporating a "forced draft cooling" principle has been placed on the market by Binks Mfg. Co.

Designed to prevent overheating of the unit, the "cooling" system employs two fans which set up a suction and blowing system inside the enclosed metal case. Placement of intake and exhaust vents permits the entrance of cooling air and its passage over all parts of the unit before being expelled.

Known as the Roche line, the new spray equipment is about the size of the average portable electric sewing machine, and roughly the same general shape. It weighs about 40 lbs., with case of heavy-gauge steel, and a single handle atop the unit for carrying. The outfit can be used with either a.c. or d.c. current.

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## New Products

### 'Thermoguard' Gives Motor Protection

EAST PITTSBURGH, Pa.—"Thermoguard," a simple automatic device developed by Westinghouse engineers for protection against burnouts in almost any type of fractional horsepower motor, has been announced by Westinghouse in a new four-page colored and illustrated folder.

The Thermoguard is intended to protect against motor failures caused by continuous overloads, frequently repeated overloads, jamming of motor drive, inability to start because of low voltage, inability to run because of low voltage, excessive temperatures, and failure of ventilation.

The device is available in three types: fully automatic, which interrupts the circuit automatically when motor temperature becomes abnormally high and restarts the motor automatically when temperature is safe; manual reset, which must be reset by pushing a button after the circuit has been broken; and automatic time-delay, which recloses automatically after a delay of at least three minutes. This last type is for applications such as oil burners with intermittent ignitions.

Copies of the Thermoguard bulletin may be obtained from the company.

### Bulletin on Combustion Testing Instruments

CHICAGO—Use of combustion testing instruments as a means of increasing the efficiency of a furnace and lowering fuel costs is described in a new bulletin published by F. W. Dwyer Mfg. Co. The bulletin illustrates the company's portable CO<sub>2</sub> indicators and draft gauges.

The units are made of clear plastic material, with all parts visible, and can be carried in any position. Charts in the bulletin show fuel losses in coal and oil fired heating plants, and temperatures for most efficient operation are given.

### Evaporative Cooling Unit Marketed By Airola

NEW YORK CITY—A new evaporative cooling unit has been announced by Airola Corp. Capacity of the unit is 120 c.f.m. Water from a 3-gallon reservoir is pumped over a special filter when the unit is in operation.

The unit is completely portable, may be operated with ice for greater cooling effect, and is claimed to be effective as a humidifier in winter months.

### Night Air Fan Unit Fits In Window

BONNER SPRINGS, Kan.—Portable night air room cooler fan, known as the "Slumberette," has been introduced by Todd Air Conditioning Co., Inc.

The unit has an adjustable diffusing grille, which is claimed will not cause drafts, and is said to provide an air change in the average size room in less than 2 minutes.

Slow moving 16-inch fan displaces 1,600 c.f.m. of air. In use, the unit sets in the window, with the sash pulled down to the top of its housing, and with transom or another window open for air outlet.

The ventilator is 18 inches high, 10 inches wide, and weighs 30 lbs. If desired, units also may be obtained with a "de-pollenizer" using a standard 20 x 20-inch Owens-Illinois "Dustop" filter.

### 3-Blade Torrington Fan Has One-Piece Design

TORRINGTON, Conn.—A new one-piece, three-blade fan of patented design in 8 and 10-inch sizes has been added to its "Aristocrat" line of propeller fan blades by Torrington Mfg. Co.

Similar one-piece fans with four blades, in 10 and 12-inch sizes, also are available. Design of the units is claimed to make for quiet operation, and one-piece construction is said to reduce manufacturing costs, and hence retail prices.

### Self-Contained Diesel Sets Introduced

PEORIA, Ill.—Two new self-contained diesel electric sets, designed to bring a low-cost answer to many refrigeration and air-conditioning problems, have been announced by Caterpillar Tractor Co.

The units are said to be especially suited to small air-conditioning plants, where they are claimed to offer direct use of diesel-electric power rather than the various mechanical alterations which might be required to drive the equipment directly by diesel engines. They also are suitable for dairies, creameries, and cold storage plants of all types.

The outfits, of 15 and 20 kilowatt capacity, can be set up and running in less than an hour after delivery, it is claimed. Only wire connections needed are from the generator terminal to the circuit breaker, and from the circuit breaker to the distribution box. The sets need no special bases, it is claimed, and can be set down anywhere and put to work.

All electrical equipment is in-built, with the exception of a circuit breaker, and no rheostats, switchboard, instruments, or other devices are needed. Even a voltage regulator is unnecessary, it is claimed. Prices of the units are down to about the same as those for gasoline generators of the same capacity, the company claims.

Units will be serviced by the Caterpillar distributor organization, and are designed to be operated by persons without special training.

Engines have been three operating adjustments, none of which involves the diesel fuel system, it is claimed. Generators are of single unit construction.

The two sizes available are the 34-15 and the 44-20. Former set is supplied in 3-phase, 110, 220, or 440 volts at 15 kw., .8 power factor, and is also available as single phase, 110-220 volts, three wire type, and 110-220 volts, two wire type at 13 kw., .8 power factor. The 44-20 set, supplied in 3-phase, 110, 220, or 440 volts at 20 kw., .8 power factor, also may be had single phase, 110-220 volts, three wire type, and 110-220 volts two wire type at 18.5 kw., .8 power factor.

### Nevinger Unit For Use With Heating Plants

GREENVILLE, Ill.—A packaged air-conditioning unit for use in conjunction with a forced warm air heating plant recently has been placed on the market by Nevinger Mfg. Co.

The unit is made for installation on the outlet side of the furnace, and utilizes the regular furnace blower and filter unit. Regularly available in 2½-ton capacity, it can be had in 5 and 7½-ton sizes upon order. The 2½-ton unit occupies a floor space 24 x 37 inches, and is 6 feet high.

Only installation required is wiring, water connections, and attaching into the main trunk line on the furnace. The unit can be furnished either with counter-flow type water condenser, or with evaporative condenser, where water costs are high.

### New Coils Are Adaptable For Heating or Cooling

NEW YORK CITY—The heating or cooling of air is the purpose of the "featherfin" heater sections described in a new eight-page bulletin recently issued by L. J. Wing Mfg. Co.

These sections are of finned copper tube design, through which air is forced. Inside the tubes is circulated steam or hot water for heating, or cold water or refrigerant for cooling.

### Norge Home Heater Improved For 1940

DETROIT—Changes designed to increase both appearance and operating efficiency have been made by Norge in its 1940 "Fastemp" home heater unit, just introduced. The unit is adaptable to small homes, cottages, and similar locations which are without central-plant heating equipment.

New heater is waist high, and is styled to blend with other home furnishings. Heat chamber, instead of being vertical, is now in the shape of an inverted "L" which extends side-wise and has 40% more heating surface. Easier regulation of the heater also is obtained through a new "triple action synco control," a dial atop the unit which adjusts oilflow, airflow, and chimney draft in one operation.

Greater floor heating efficiency is obtained by radiant heat rays which pass through the louvers in front of the heater and warm the floor immediately in front of it, it is claimed.

The heater is finished in rich brown, designed to blend with furniture woods and floor coverings. It is of modern design, and has stainless steel trim mouldings.

Low flue connection makes installation possible anywhere, it is claimed, and a concealed storage tank holds 7½ gallons of oil. A humidifier also is incorporated in the unit.

Forced air circulation may be added to the unit at extra cost by means of an electric blower installed at the rear of the cabinet. Two types of blowers are available, one of which may be used with ordinary 4-inch conductor pipe to deliver heat to another part of the house.

### Westinghouse Builds 2-Gal. Water Heater

MANSFIELD, Ohio—A new two-gallon, non-pressure type water heater has been added to this year's Westinghouse line. The new heater has been designed for sale to rural, commercial, and minimum bill customers, and has a suggested list price of \$24.50.

Dimensions of the unit are 6½ x 10½ x 17½ inches, making it easy to install at the point of use. A 1,250-watt "Corox" heating element is used, and a thermostat, adjustable from the front, permits a water temperature variation of from 120 to 170° F.

Tank is of tinned copper. A Z-shaped baffle over the cold-water inlet minimizes mixing of hot and incoming cold water. Cold water inlet valve is supplied with the heater. Tank is insulated with glass wool.

Hanging brackets and 6 feet of rubber-covered grounded cord are supplied as standard equipment.

### Cabinet-Mounted Fans In New Wagner Line

ST. LOUIS—A new line of air freshening equipment for residential and apartment use has been announced by Wagner Electric Co. here. Cabinet-mounted fans for installation in attics are offered in capacities ranging from 7,500 to 20,000 c.f.m.

Fan cabinets are of heavy-gauge steel; walls are acoustically treated to absorb vibration and wind noises. Finish of the cabinet is a high gloss vermilion. All units are equipped with rubber-mounted Wagner motors.

The Wagner apartment cooler has been designed for installation within the living quarters. The unit is usually located in a window, where it draws air outdoors. Adjustable panels permit mounting in any window from 24 to 36 inches wide.

### MASTER SERVICE MANUALS

By K. M. Newcum



**Household Refrigeration**  
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**Household Refrigeration**  
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**Household Refrigeration**  
MANUAL NO. 4—Service information on 12 makes of household electric refrigerators including Absopure, Apex, Atwater Kent, Coldspot (Sears and Sunbeam), Copeland, Dayton (Niagara), Fairbanks-Morse, Graybar, Ilg-Kold, Iceberg, Liberty, Rice, Servel. 136 pages. \$1.



**Commercial Refrigeration**  
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MANUAL NO. C-3—Installation and service methods continued. Chapters on expansion evaporators, including blower units and all modern types. Thermostatic expansion valves. Pressure and temperature controls. Refrigerant control valves. Electric motors, starters, overload relays. 144 pages. Price \$1.00.



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## Chicago Institute's Study Plots Growth Of Refrigerator Replacement Market

CHICAGO—The prediction that within the next four years more than half the annual sales of household electric refrigerators will involve replacement of an existing refrigerator is made in a copyrighted survey recently completed by the research division of Refrigeration & Air Conditioning Institute.

Aim of the study is to predict the market absorption of household refrigerators for the next 30 years, with particular emphasis on the probable trends of this branch of the industry during the 10-year period ending in 1948.

In emphasizing the important part which replacement sales will play in the household electric refrigerator sales picture of the next decade, the study estimates that, by 1942, the yearly sales of refrigerators to replacement customers will have passed those made to persons who have not before owned a refrigerator.

### REPLACEMENTS ON RISE

From that year on, the study estimates, replacement sales will account for an increasingly large proportion of the annual sales total, while market expansion sales to new customers will show a correspondingly steady decline.

Just how fast the replacement sales market will grow in the next decade will depend, of course, upon the rate of retirement of household refrigerators now in use. While it is naturally impossible to give an exact forecast of this replacement rate, a "life expectancy" table has been worked out as a tentative basis for estimating how long the initial purchasers will use the units before they trade them in on new models.

This table, covering models sold from 1927 to 1938, inclusive, gives the following "life expectancies": 1927 models, 6 years; 1928 models, 7 years; 1929 models, 8 years; 1930-31 models, 9 years; 1932-33 models, 10 years; 1934-35 models, 11 years; 1936-37-38 models, 12 years. Using this as a basis, and assuming that the models sold in any one year will vary in length of life in a more or less symmetrical pattern close to the average, the survey constructs a schedule of replacement sales for the next 10 years.

### RATE OF GROWTH CHARTED

To gauge the probable trend of market expansion sales during this period, the study estimates the rate of market growth, based on the utility of the refrigerator as compared with other household appliances (irons, vacuum cleaners, washers), and the increase in the number of wired homes which the next 10 years will bring. For the purposes of the study, it is assumed that the "resistance point" of saturation will be reached when approximately 80% of existing homes are equipped with electric refrigerators. In other words,

not more than 80% of the homes wired for electric service ever will buy an electric refrigerator.

This point should be reached, the study estimates, within the next 20 to 25 years. It is also believed that the growth of the market will be most rapid during the next few years, and will taper off as the saturation level rises.

Combining all these factors, the study presents a calculation of the estimated sales of refrigerators during the next 10 years. (See table in Columns 4 and 5.)

It will be noticed that the number of expected sales for replacement of retired units rises from year to year. This, the study says, reflects the increase in sales during the period from 1929 to 1938, from which the schedule was constructed, and cannot be taken as an indicator of the replacement trend for the years following 1948.

### DOWNWARD TREND

The estimated expansion and replacement sales for the next 10 years are plotted together on the chart which appears elsewhere on this page, with the replacement figures above those representing sales to new consumers. The upper line represents total estimated sales.

It will be noticed that there is a slight downward movement in this line for the years 1940 to 1944. This is because the predicted decrease in expansion sales exceeds the increase predicted for replacements in those years, the study points out. After 1944, expansion sales are expected to decrease at a constantly diminishing rate, hence the upward movement of the total sales curve after that year. As the market approaches its maximum saturation level, sales will become more and more largely a question of replacements.

### FLUCTUATIONS POSSIBLE

Referring again to the estimate for the next 10 years, it will be noted that at only one point in the prediction curve do total sales pass the million-and-a-half mark—in 1939, when a considerable rebound from the slump of 1938 is expected, although the estimate for that year is only about two-thirds of 1937 sales.

This is explained by the fact that the total sales prediction curve represents a prediction of trend, and does not allow for annual fluctuations due to cyclical trends in business.

"It is quite possible that in the next 10 years more or less extreme upward and downward movements will occur in the sales curve, with the result that refrigerator sales will again hurdle the 2,000,000 mark, but no attempt to predict these annual movements is made here," the study points out.

"A consistent year after year sales expectancy of over 2,000,000 units is not due for at least 15 years."

Also, the study states, future sales fluctuations will become less and less dependent on sales to new consumers, and more and more a matter of the number of years people decide to use their old refrigerators. Both of these sales sources are in turn dependent on family income, and the degree to which income fluctuations will affect sales has not yet been determined.

Sales also depend upon the number of wired homes, and since approximately 70% of homes in the United States at present are equipped with electricity, its rate of increase will tend to diminish as the maximum is approached. Allowance was made for this in the estimate of market expansion given in the survey.

In considering predictions made in the study, it is important to remember that these are based on a number of variable factors—changes in population, number of wired homes, useful life of refrigerators, relative utility of refrigerators as compared with other appliances, resistance point in saturation levels, etc.—and represent trends rather than actual unit sales figures. For instance, the probable sales of refrigerators for any one year could not be predicted with any great degree of accuracy, because of possible variations in general business conditions. Over a long-time period, however, these variations will even up and in general will follow the trend curve.

One broad interpretation that may be drawn from the trend curve is that production for the next 10 years is going to be generally downward.

"Sales in domestic refrigerators have reached their first high peak, and the market for new users is saturating more rapidly than the

## Estimated Sales For Next 10 Years

Year	Saturation Level	Estimated No. Wired Homes	Estimated Market Expansion Sales	Estimated Replacement Sales	Estimated Total Sales
1939	55.3	23,666,000	1,060,000	489,000	1,549,000
1940	58.8	24,031,000	880,000	566,000	1,446,000
1941	61.5	24,373,000	745,000	644,000	1,389,000
1942	63.6	24,692,000	610,000	721,000	1,331,000
1943	65.4	24,989,000	500,000	798,000	1,298,000
1944	66.9	25,262,000	405,000	876,000	1,281,000
1945	68.3	25,513,000	340,000	953,000	1,293,000
1946	69.5	25,764,000	285,000	1,030,000	1,315,000
1947	70.5	25,992,000	240,000	1,108,000	1,348,000
1948	71.5	26,220,000	210,000	1,185,000	1,395,000
			5,275,000	8,370,000	13,645,000

replacement market is growing. After about a 10-year period, these two opposing forces will have reached the point of balance, and the general force of replacement sales will become predominant," the study says in this regard.

"At this time, a new rise in the trend curve will set in. Until then, however, the trend must be downward."

Biggest marketing problem of the next 10 years, the study concludes, will be how to dispose of trade-in refrigerators. Despite indications that the refrigerator sales situation will develop into something very much like that in the automobile industry today, refrigerator manufacturers apparently are not aware they are facing such a situation, it continues. In fact, many dealers are not aware of the percentage of their sales that are replacements, and they invariably estimate these

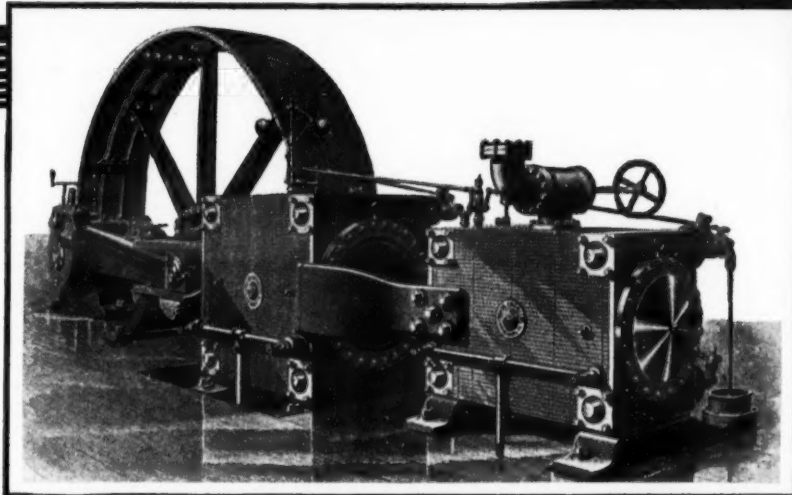
sales at a much lower percentage than is actually the case.

Key to the situation, the study declares, lies in the development of sound servicing organizations equipped to recondition refrigerators that are taken in in exchange for new models, together with a method of merchandising this equipment in the lower income groups.

"So far as the new refrigerator market is concerned," the study goes on, "during the next 10 years, it is obvious that the competitive aspects of it will be intensified, as is always the case in a situation of declining sales. It is here, of course, that price will play its most important role."

New models, fancy gadgets, new designing, and other superficial features which may be transferred into sales appeals also are more important in a highly competitive market, it is pointed out.

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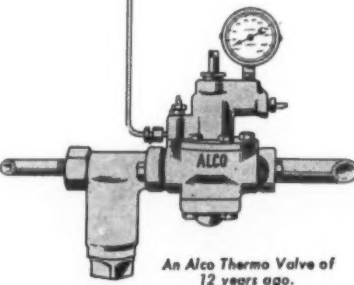
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Alco was the first to conduct complete tests on standard low sides to determine the best and most efficient control applications to various types of evaporators. Alco pioneered in being the first to use the simple cage type construction; first to use atomic hydrogen welding of the power assembly; first to introduce the Multi-Outlet Thermo Valve. As compressors developed from types similar to that shown above, Alco has steadily improved the design and per-

formance of Alco Thermo Valves to meet new applications and new performance standards. Contrast the early Alco Valve at the left—large, complicated, with many parts—with the light, yet sturdy streamlined efficiency of an Alco Thermo Valve of today shown below.

Proof of Alco's leadership is to be found in the performance record of thousands of Alco Thermo Valves in operation on every type of air conditioning and refrigeration installation throughout the world. Just as in the earliest days of the industry, Alco today offers the most accurate, dependable refrigerant controls designed for long life and completely satisfactory service.

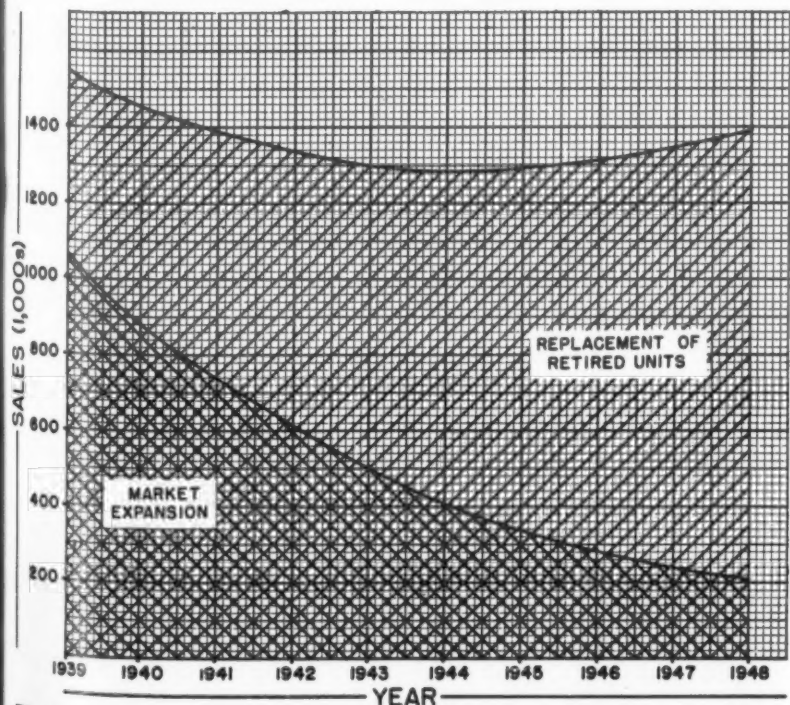


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## How Replacement Market Will Grow



The lower shaded area represents the estimate of sales attributable to market expansion, the upper shaded area, sales for replacement, in the period 1939 to 1948, inclusive. Upper line at the top of the shaded area is the combined or total sales prediction. Figures on which the chart is based are given in the table on this page. (Copyright, 1939, by Refrigeration & Air Conditioning Institute, Inc.)



## Distributor-Dealer Doings

### Sales Gaining In South; Chain Reports 17% Increase In First 6 Months of '39

KNOXVILLE, Tenn.—An increase of more than 17% in sales for the first half of this year over 1938 figures is reported by Sterchi Bros., furniture and appliance chain operating 34 stores in seven southern states.

Sales for June totaled \$527,343, as compared with \$379,865 for June, 1938, an increase of approximately 39%. For the first six months of the year, sales amounted to \$2,692,397, as compared with \$2,291,896 for the same period last year.

Increase is continuing in July, reports C. C. Rutherford, president of the company, sales for the first eight days of the month being 21% ahead of the same days of that month last year. Every month this year has shown an increase, with gains rang-

ing from 10 to 38%, he said.

Better business conditions throughout the South have been an important factor in sales gains, Mr. Rutherford declared. He added that indications are that this upward trend will continue through the year.

"Electrical appliances are still much in demand in the South," he stated, "owing to reduced rates, brought about largely by the TVA. Refrigeration has fallen off some in volume, but there has been a decided increase in sales of electric ranges, indicating that more kitchens are being completely electrified."

Jewelry departments will be added to four more stores, making 12 in the chain handling this merchandise. The store at Shelby, N. C. will move into a new building about Aug. 1.

## Off To the Fair....

WASHINGTON, D. C.—Ten all-expense tours to the New York World's Fair were principal prizes awarded by the Electric Institute in an essay contest on "Why I Would Like to Have Automatic Heat in My Home Before Next Winter Sets In."

In addition, contestants won five cash prizes of \$25 each and 20 cash prizes ranging from \$5 to \$15 each. Local automatic heating dealers and oil companies participated in the campaign.

Jack Bartlett, head of the Electric Institute, reports that out of a mailing to 20,000 home owners, there were 600 requests for entry blanks, of which 65% came through dealers.

Preliminary announcements sent to home owners described the World's Fair trips, rules of the contest, and the advantages of automatic heating. Contestants were urged to get in touch with dealers to secure entry blanks.

Dealers participating in the promotion were John P. Agnew & Co., Inc.; Lee D. Butler Air Conditioning, Inc.; James E. Colliflower & Co., Inc.; Colonial Fuel Oil, Inc.; Columbia Specialty Co., Inc.; Combustioneer Corp.; District Coal Co.; Dome Oil Co.; Griffith-Consumers Co.; Loughborough Oil Co.; Thomas W. Perry; Sears, Roebuck & Co.; L. P. Steuart & Bro., Inc.; United Equipment & Supply Co.; and A. P. Woodson Co.

## ....Georgia Too

SAVANNAH, Ga.—The "Curtis Regatta," a sales contest sponsored by C. C. Curtis, president of Savannah Electric & Power Co., has salesmen pointing their sales yachts toward the port of New York, for the two top salesmen in the appliance drive will be awarded free trips to the New York World's Fair.

The contest is in the form of a yacht race from Savannah to New York City, with the cities of Charleston, Norfolk, and Baltimore as intermediate points of call. Each salesman has a quota of 25 ranges, 15 water heaters, and 40 refrigerators, which, at two points for each range, two points for a water heater, and one-half point for each refrigerator, make up a total of 100 points. Until a combined sales quota of 300 appliances is reached, no salesman is eligible for a prize.

The record of the "regatta's" progress is kept on a large outline map of the southeastern coast line of the United States, and the sales-going salesmen heighten the atmosphere of the contest by wearing yachting caps and getting right into the "swim" of things.

## 'Tom' Jefferson's Home Town Gets Electric Kitchen

CHARLOTTESVILLE, Va.—An all-electric kitchen has been installed in the Monticello Dairy here for use by the city's various Homemakers clubs. Gilmore, Hamm & Snyder, Westinghouse dealership, made the installation.

## Wilson's Takes Over Killoren Appliance Dept.

APPLETON, Wis.—Wilson's Music & Appliance Co. here has purchased the electrical appliance department of the Killoren Electric Co.

## San Antonio Group Takes New Name, Constitution

SAN ANTONIO, Tex.—Adoption of a new constitution, election of new officers, and selection of a new name marked activities of last week's meeting of the San Antonio Radio & Refrigeration Trades Association. Name of the organization is now the Electric & Gas Appliance Association of San Antonio.

New officers elected were: J. W. Thiele, Straus-Frank Co., Frigidaire distributor, president; E. A. Gauthier, San Antonio Public Service Co., vice president; and Lester Hill, A. C. Toudouze Co., General Electric, secretary-treasurer.

New constitution has been adopted so that commercial and industrial refrigeration, major appliances, attic ventilation, and other associated lines may be included in the activities and membership.

The present group is a continuation of the San Antonio Radio Trades Association founded in 1923, and enlarged in 1928 to include refrigeration.

Mr. Thiele succeeds Royal P. James. Leon Walthall, retiring secretary, was voted an honorary membership.

## McNamara 'Closes Fast' To Win Sweepstakes

SPRINGFIELD, Mass.—Sales jockeys crossed the finish line in the eight weeks' electric range "sweepstakes" campaign sponsored by United Electric Light Co. this month with a total of 441 units to their credit. The quota was 250.

Top sales honors went to Frank McNamara of Angers Electric Co., who sold 20 ranges. Sam Boyd, sales manager of Collins Electric Co., was second with 12; third, Tony Delizia of Collins Electric Co.; fourth, Roy Nooney of Albert Steiger department store; and fifth, Fred Martin of the Steiger store.

A "victory dinner" was held at the close of the campaign when prizes and bonuses were awarded by Denny Corey and Maurice Hammigan of the utility.

During the remainder of the summer, the utility will continue to concentrate on range sales, and is planning surveys in outlying districts. Sales training for company salesmen and promotional activity for dealers will also be carried on.

## South America Joins Electric Kitchen Parade

BOGOTA, Columbia, S. A.—A modern G-E all-electric kitchen has been installed recently in the local offices of the International General Electric Co. Designed by Mario G. Ubico, it was installed by Guillermo Marulanda. Plans are being made to install similar kitchens in Cali, Medellin, and Baranquilla.

## Wolfson Opens New Appliance Store in N. J.

BAYONNE, N. J.—David Wolfson, refrigerator-appliance dealer, has leased a store at the southwest corner of Broadway and 25th St.

## Group Buying Law Observance Urged

MILWAUKEE—To encourage employers in Milwaukee County to comply with provisions of the new Wisconsin law which outlaws factory group buying of appliances for employees, the Wisconsin Radio, Refrigeration & Appliance Association has sent to 317 industrial and business institutions a copy of the law, together with a letter urging their support of the measure.

"Ours and other retail trade associations which have been interested in correcting this evil are of the opinion that a reasonable compliance with the new law by leading employers in Milwaukee County will be of considerable benefit to the retail trade structure of our community, and, therefore, will make a substantial contribution toward local business improvement," the letter reads, in part.

Members of the association are being urged to aid in enforcing the law by reporting violations, which are subject to fines.

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**PEAK**  
Controlled Performance VALVES

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Protect the reputation of your product  
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Here's How  
You Can Get  
**TRAINED MEN**  
U.E.I. Free Placement Bureau will put you in touch with a trained, competent worker. U.E.I. trained men have made good as shop mechanics, installers and service men in this industry for years. This service is Free to you and prospective employee. Try it.  
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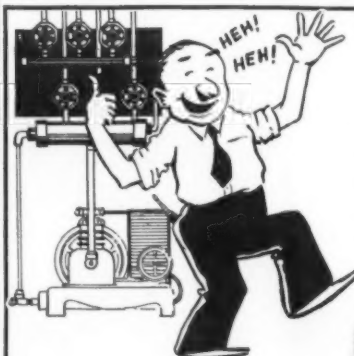
## SERVEL Silver Fleet

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"Beauty is only skin deep" . . . but under the lustrous silver surface of these sensational new Servel units, you'll find a degree of performance, economy and noise-



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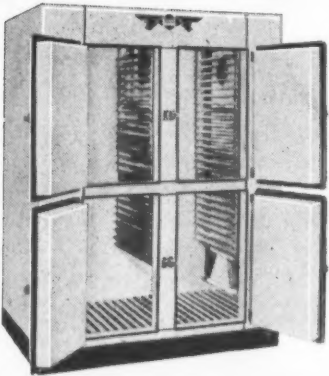
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Ask for franchise details, mentioning territory covered.

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Ranco KWS Household Replacement Control

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## Foreign News

### 'Eat, Drink & Be Merry, For Tomorrow We'll Be Nazified', They Say In Danzig

By Robert Koebel

To roam around the streets of Danzig and see the people one can hardly realize that the interest of the world is so wrapped up in what is happening in this small city. It is true that many soldiers wear the Nazi arm band—but we saw only one person give a soldier the "Heil Hitler" salute.

It is our opinion that Danzig will be German around the middle of September. About 96% of the people are German born. Their clothes and customs are German. If they remain a free city could not some other power take Danzig freely?

It was interesting to note that leaving Poland we found small artillery weapons camouflaged by trees and bushes in crests over the highway that back to Danzig. Tank defenses were built along the road.

#### INGENIOUS TANK DEFENSE

A tank defense consists of long iron steel bars stuck into the highway at angles. There is room enough for one car to go around these bars on the highway. Within a few hours, the remainder of the highway could be defended by re-cementing

it and putting the iron rods into the cement.

What interested us most was the fact that Danzig did not have any defense of any sort to stop the Germans if the German Army decided to march into Danzig.

We ate at a small restaurant in the middle of the town, where we invited our waiter to sit down and talk with us. We talked a little about politics until the head waiter

#### TOOLMAKER'S SON VISITS EUROPE'S POWDER KEG

**Editor's Note:** Most-watched spot in Europe today is the free city of Danzig in the Polish Corridor. Will it be the Sarajevo of the next European War? Will its foreign trade facilities look so attractive to Hitler that he will risk fighting Poland and possibly England and France?

The adjacent notes on Danzig today were taken from a letter written to C. J. Koebel, president of the Koebel Diamond Tool Co. of Detroit, by Mr. Koebel's son, Robert. Recently graduated from Culver Military Academy, young Koebel is making a tour with friends, of Norway, Sweden, and Denmark. Later this summer he will enroll at Upsala University in Stockholm, Sweden.

came over and asked us politely to refrain from talking politics.

We asked the waiter if he wished Danzig to remain free or be German, but he told us he would rather not answer to the question. You see, the people of Danzig cannot trust anybody. So they keep their political thoughts to themselves.

The head waiter was a very congenial sort of a fellow and he came over and sat down. We asked him what he thought of the situation, and before he answered us, he looked all around the restaurant to see if anyone was within hearing distance. In a low whisper he told us that he thought Danzig would be German in September.

#### CELEBRATE OFTEN

On the way back to Gdynia we passed a small town where all over the streets and houses were hung the Nazi flags. We asked our driver why there were so many flags and he said they put them up any time they think they should celebrate, which was once or twice a week.

We stopped at Zoppot, a very large summer resort, much like our Atlantic City in the States. The place consists of a number of hotels, beaches, restaurants, stores, dancing pavilions, and a gambling casino. Again we were amazed at the attitude of the people.

#### KEEP IT FROM GOVERNMENT

They looked not at all like people whose destinies are being anxiously followed by the world—they were having a wonderful time, eating, dancing, gambling, and walking down the streets. We hear of the poverty of the people in Europe, yet they acted as if they had all the money in the world.

The S. S. Scanyork's doctor was with us and he draws an interesting conclusion from this sight: Either they never save money for the future, or they know what is coming and what to expect under Nazi rule, so they are spending to get rid

of money rather than to have the government take it from them.

Poland seems to be on the spot in the current situation. By the treaty of Versailles, Danzig, which covers 760 square miles, was declared a free city. It has its own municipal administration. By terms of the treaty, however, Poland represents Danzig in external matters after conferring with the Danzig Senate. Danzig has its own money, which is equal in value to the Polish money. The League of Nations appoints a high commissioner who lives in Danzig.

#### HITLER NEEDS GRAIN

Danzig exports much grain to the outside world, and in Danzig they hear of the poverty-stricken Germans who need this grain to live on. Hitler needs this grain, and Hitler also realizes that Danzig is an important port, one of the largest in the Baltic. Its exports were over seven million tons in 1937.

Danzig is also noted for its ship building, and in the last few years has been forced to refuse orders because the space cannot accommodate the orders.

Now when Danzig goes to Germany, Poland will be right next door to the Germans. Poland wants to defend Danzig, but if Poland starts a war or is in anyway aggressive, England will not help.

Why should England help Poland when there is nothing in the pot for the English? England will help if Poland is attacked but Germany will not do that—at least not for awhile after they secure Danzig.

#### GYDNIA'S GROWTH AMAZING

Gdynia is the largest port of Poland. It has expanded from 500 inhabitants in 1924 to 111,000 today. Its total exports were nine million tons—two million more than Danzig—in 1937.

We noticed many new buildings being constructed, and coming back from Danzig we stopped at the top of a hill where beneath us spread the whole city of Gdynia. It is almost unbelievable to realize how this city has grown in 15 years—and it is still being made much larger. As in Danzig, nobody will express their feelings politically, so we could not get any idea of how or what these people think of the current crisis.

#### Reports From Consuls

Market for refrigeration equipment in Brazil is indicated, the American Consulate at Bahia points out, by the fact that in 1937 only 522 refrigerators were imported, just 28 units more than the 494 refrigerators imported the previous year. All of these machines were of American make with the exception of a few Electrolux models, 87 of which were imported in 1937, and 74 in 1936.

Most refrigerator firms in Brazil service the machines that they sell, the Consulate reports, and there are no organizations in Bahia engaged exclusively in servicing refrigeration equipment. Dealers in Bahia carry parts and accessories only for those refrigerators that they handle.

United States had the electric refrigerator and parts market in Peru almost to itself during 1937, according to figures released by the American Consulate General at Callao-Lima, selling \$458,456 out of a total of \$474,753. In vacuum cleaners and similar articles, however, Germany was almost as predominant, selling most of the total of \$68,808.

### Many Foreign Buyers Arriving To See the Fair & Visit Suppliers—Who Some of Them Are

Many foreigners are visiting the United States this year on "buying trips" with the intention of contacting manufacturers of air-conditioning equipment, major appliances, and other electrical lines in which they are interested. These individuals may be contacted in the various cities they expect to visit through the district offices of the U. S. Department of Commerce's Bureau of Foreign and Domestic Commerce. In cases where the itineraries of these travelers are unknown, the men may be reached through the bureau's New York City office.

Included among the visiting buyers are:

Francisco Ernesto Isnard, representing Isnard & Cia., 20 Rua Evaristo da Viegas, Rio de Janeiro, Brazil. He is interested in air-conditioning equipment of all kinds. He will visit New York, Detroit, and Philadelphia.

#### WANTS REFRIGERATOR LINE

J. Tarnopol, 69 Hezaren Caddesi, Galata, Istanbul, Turkey. He is interested in making connections with American manufacturers of radios, electric refrigerators, and other electrical goods including all types of electrical machinery, motors, equipment, and accessories.

William Edwin Gilmore, representing Gilmore & Co., 35 Fountain St., Belfast, Northern Ireland. Mr. Gilmore is interested in domestic

electrical appliances. He was expected to make trips to Philadelphia, Chicago, Detroit, Washington, and New York City.

Antonio Goncalves de Oliverira, representing Goncalves & Cia., Rue Dr. Rocha Cavalcanti 91, Macelo, Alagoas, Brazil. He is interested in electrical materials and appliances. He was expected to visit New York, San Francisco, and other cities.

David Bloch, representing "Sofurnel," Ste. des Fournitures Electriques, S.a.r.l., 13 Rue Sainte Aurelie, Strasbourg, France. He is interested in electrical appliances and machines for molding bakelite. He was expected to arrive at New York City for a one-month visit.

#### VISITOR FROM FINLAND

Verner Christian Oesch, general manager of Suomen Maanviljelijain Kauppa O.Y. Hampere, Finland. He is interested in electrical equipment. He was expected to make a one-month visit to New York, Washington, and Oregon.

Joachim Tarnopol, Istanbul, Turkey. Mr. Tarnopol is interested in making connections with American manufacturers of electric refrigerators, radios, and other electrical goods including all types of machinery, motors, equipment, and accessories. He is a well known importer of electrical goods and machinery, his firm having been established in Turkey since 1922.

## THE BUYER'S GUIDE

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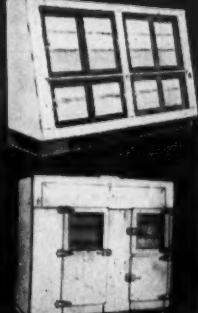


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## Commercial Service

### Installation and Servicing of Accessory Fixtures Multiplexed With Fountains

By Arch Black and Dean C. Seitz

#### Accessory Fixtures Used on Soda Fountain Layouts

Up to this point we have been concerned only with the main refrigerated fixture which has been called the creamer unit. There are two accessory fixtures which are frequently multiplexed with the creamer unit on the larger soda fountain installations. These two fixtures are the sandwich preparation table and the refrigerated back bar base.

#### Sandwich Preparation Table

Sandwich preparation tables are sometimes called salad preparation

tables or "Bain Mariés." In general the construction of all sandwich preparation tables is similar. The top of the table is frequently a maple cutting board on which the sandwiches and salads are prepared.

On the rear top of the table are found several jars or crocks in which the sandwich spreads are kept. These crocks rest in a pan which is mechanically refrigerated, while the interior of the sandwich table is simply a refrigerated storage space in which the bulk storage of the sandwich preparation materials are kept. The desired temperature in the interior cabinet space is between 40 and 45°. Standard sandwich preparation tables are usually manu-

factured in lengths of 3, 4, 5, and 6 feet.

During that period of growth in the soda fountain business during which the creamer units were refrigerated by means of flooded boilers, all the sandwich preparation tables were likewise refrigerated by means of flooded boilers. The usual construction at that time was to build a small brine tank which refrigerated the interior space, as an integral portion of the top pan in which the crocks were placed. The boiler used was the header only without any tubes. This permitted making a very shallow brine tank which did not take up much space in the inside of the cabinet. A brine of 40% alcohol and 60% water was usually used in this tank.

When multiplexing this flooded boiler sandwich table with a creamer unit it was necessary to use a pressure regulating valve in the suction line leading from the sandwich table boiler. This pressure regulating valve was exactly the same as the valve used on the water bath of the flooded boiler creamer unit.

#### USE DIRECT EXPANSION

During more recent years, sandwich preparation tables have been refrigerated by means of direct expansion coils. Fig. 1 illustrates a cross-section through a typical direct expansion sandwich preparation table. It will be noted that the top pan in which the crocks rest is refrigerated by means of a coil soldered to the bottom of the pan.

This same coil is extended up the rear back wall of the table to provide sufficient cooling to hold the temperature of the fixture between 40 and 45° F. This coil on the back wall acts as a combination refrigeration coil and drier coil. A thermostatic expansion valve is used with the bulb located approximately 8 to 12 feet back from the end of the expansion coil. This last 8 to 12 feet acts as the drier coil.

When a fixture of this type is multiplexed on a creamer unit it is necessary to use a temperature regulating valve. This valve is installed in the suction line with the bulb either fastened to the suction line or to the lining of the cabinet itself. The temperature regulating valve is exactly the same as the valve described previously as used on a direct expansion water bath fountain to control the amount of ice formation.

Main point in connection with sandwich preparation tables which the service engineer should call to the attention of the customer is the fact that they must be manually defrosted at regular intervals. Usually a hand shut off valve installed in the liquid line is provided by the soda fountain manufacturer for this purpose.

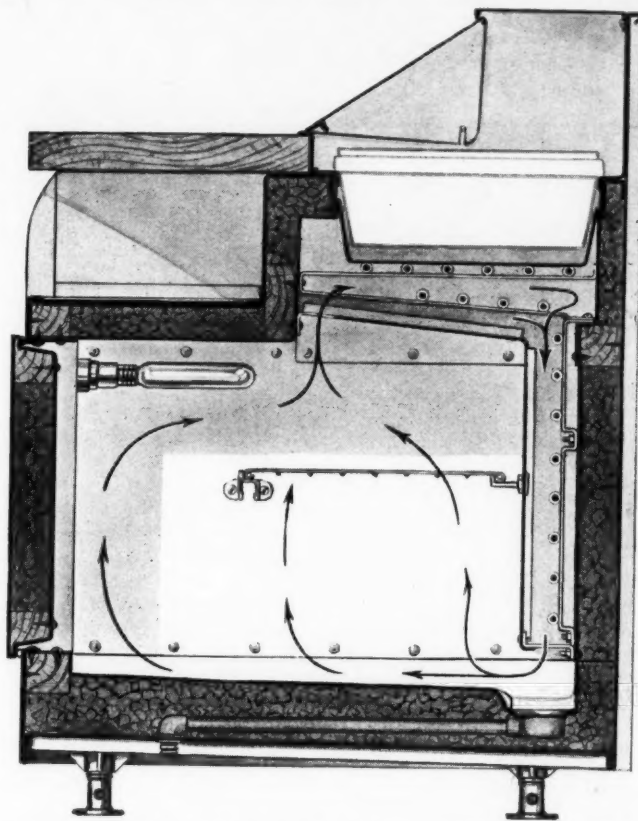
Always caution the customer never to leave this liquid line shut-off valve closed after the coil has been defrosted because it will have a tendency to increase the length of the cycle when the table is multiplexed on a creamer unit. The reason for this is the fact that the pressure switch on the condensing unit cuts in due to the pressure built up in either the water cooler or the sandwich preparation table.

With the sandwich table cut off the circuit, there is always the possibility that the condensing unit will not start as quickly as it should, thereby lengthening the cycle and possibly permitting the ice cream to become too soft. The liquid line shutoff valve should only be closed for short periods of time for defrosting purposes only.

#### Refrigerated Back Bar Base Section

The second fixture which is frequently found on soda fountain layouts is a refrigerated back bar sec-

Fig. 1—Direct Expansion Sandwich Table



Cross-section through a typical sandwich preparation table refrigerated by direct expansion. Note location of coils beneath top pan in which crocks rest.

tion. This back bar base usually consists of shelving, pan refrigerated storage sections and refrigerated storage sections. The refrigerated storage section is frequently used for the bulk storage of bottled goods such as ginger ale, White Rock, and bottled milk. The temperature desired is again between 40 and 45° F.

Just as described for sandwich preparation tables, the first refrigerated back bar base sections were refrigerated by means of flooded boilers installed in brine tanks, and a pressure regulating valve was necessary to maintain the desired temperatures.

More recently back bar base sections are refrigerated by direct expansion coils. The coils may be either bare tubing or finned coils. In either case a thermostatic expansion valve and temperature regulating valve are used.

Fig. 2 illustrates a typical back bar base section. If bare tubing is used for the refrigeration coil, it

is usually coiled up the back wall with 8 or 10 feet of the tubing used as a drier coil at the top. The bulb of the thermostatic valve is located at the start of the drier coil. The temperature regulating valve is placed at the end of the drier coil with its bulb either in the suction line or fastened to a portion of the lining.

When finned coils are used for the refrigeration of the back bar base (Concluded on Page 19, Column 1)

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## THE BUYER'S GUIDE

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### Here's What You've Been Asking For—Booklets Containing Previous Soda Fountain Articles

This series on servicing soda fountains will be published in book form soon after the last article is published in the News, probably in September. Forty pages of the manual are already completed and a limited quantity of press proofs were struck off. These forty pages, stitched into a folder, include the first 10 installments which were published in the News Oct. 19 to Dec. 28, 1938. Here's how you may obtain the first 40 pages at once:

- (1) Send a new or renewal subscription to AIR CONDITIONING & REFRIGERATION NEWS for one year. Price \$4.00. (Foreign \$6.00.) You will receive the preprints of 40 pages at once, also similar preprints of the entire series on Soda Fountain Refrigeration. This offer expires Aug. 31, 1939.
- (2) Or send 20 cents in stamps or coins for the folder containing the 40 preprinted pages only, as described in the above paragraphs.



## Back Bar For Soda Fountain Installation

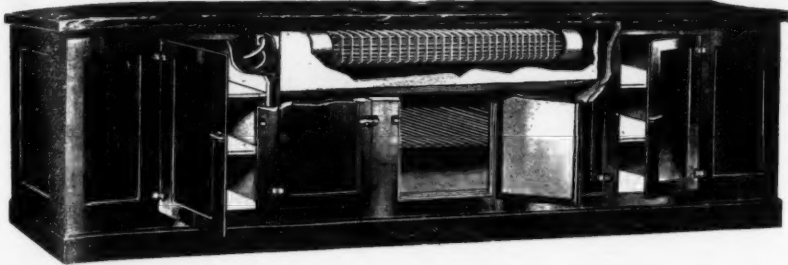


Fig. 2—"Back bar" for a soda fountain set-up. The cut-away view shows interior arrangement and placement of the coil.

## Snap-Action Valve Used On Back Bar

(Concluded from Page 18, Column 5)  
The snap-action valve is used in place of a temperature regulating valve. Again the only service problem involved is one of properly instructing the customer in the proper method of defrosting the refrigeration coil whether it be bare tubing or a finned coil.

## Alumaweld Co. Changes Name and Moves

CHICAGO—Alumaweld Co. of America, manufacturer of soldering compounds, has changed its firm name to Lloyd S. Johnson Co., and has moved to a new location at 2241 Indiana Ave. here. Management of the company, under Lloyd S. Johnson, and the rest of the personnel throughout remain unchanged.

## Wisconsin U. Offering Refrigeration Courses

MADISON, Wis.—Home study courses in three technical subjects—elements of air conditioning, heating and ventilation, and refrigeration—are being offered by the extension division of University of Wisconsin.

Each of these courses, prepared by university instructors, is independent of the others, but all three cover the technical considerations necessary in making approved installations.

The course in air conditioning, in 16 assignments, explains the scientific principles involved and their practical application to the conditioning of homes, offices, factories, and other buildings. Instruction in heating and ventilation, in 24 assignments, covers the planning, estimating, installing, and operating of heating and ventilating systems.

Refrigeration course, in 24 assignments, covers the principles involved in the construction and operation of refrigeration systems.

## Survey Shows That Building of New Homes Was Reaching a High Level By Start of '39

MINNEAPOLIS—New home construction, in both volume and value, in 310 leading American cities reached the highest level last year in more than nine years, as shown by the annual home building survey of Investors Syndicate of Minneapolis.

Contributing substantially to this increase was the fact that the average cost per person provided with new housing was the lowest in four years, according to C. J. Ryan, vice president of the company.

"The average cost per person supplied with new housing in these 310 cities in 1938 was \$912.80," said Mr. Ryan. "This is the lowest per person figure since 1934, when the cost was \$874.26."

The cities included in the survey, located in 41 states and the District of Columbia, have a total population estimated at 49,957,616, or nearly three fifths of the population of the United States. Per capita costs of housing in this group of cities not only showed a decline of 9.27% from the 1937 cost, but also were 19.64% below the 1930 level.

## DOLLAR BUYS MORE NOW

"The public does not seem to fully appreciate that in most sections of the United States today real estate dollars will buy more space and quality, in both new and modernized homes, than they did in the 'normal' building year of 1930 because land, labor, materials, financing, and selling costs are lower than they were nine years ago," declared Mr. Ryan.

"Downtrends in home building costs in 1938—a trend that continues to date this year—spurred residential construction volume and value in these 310 cities to the highest levels for at least nine years, or the period covered by the survey.

"An increase in population, second largest in the areas and period studied, along with decreases in vacancies, increases in marriages, further undoubling of families, relatively high rents in some regions, ease of financing and obsolescence of existing home units, favored residential building expansion last year."

## HOMES FOR 665,632

New homes built last year in these cities sheltered 665,632 people, or the largest number in nine years. This 665,632 total is 146,440 more people than were furnished new residences in 1930; 163,124 more people than were so provided for in 1937; and 112,332 more than were housed in the four combined years of 1932, 1933, 1934, and 1935.

Last year, for the fourth successive year, the Investors Syndicate report pointed out, the number of persons provided with new housing in these 310 cities increased. The gain of 163,124 persons provided for was the largest during the period studied.

"Residences put up during 1938," continued Mr. Ryan, "provided new homes for 32.46 more people than in 1937 and a gain of 28.21% over the 'normal' year of 1930. Newly erected homes last year provided for 25.42% of the persons accommodated with new residences during the 1931-1938 period.

## HIGHEST IN 9 YEARS

"Value of new residences constructed during 1938, as a result of the fourth annual successive rise, reached the highest level in nine years. New houses put up last year in this group of 310 cities, based on building permits filed, were valued at \$607,588,915. This total was 20% greater than the 1937 value of \$505,563,592 and 3.02% above the 1930 valuation of \$589,748,548. Likewise, new home valuations last year were more than seven and a half times their low level reached in 1934. And the 1938 valuations exceeded by \$103,644,590, the total for the combined years of 1932, 1933, 1934, and 1935.

"Despite the four successive annual increases in the volume of new housing in these cities, only 89% of the population rise since 1930 obtained new residences. From 1931 to 1938, inclusive, 2,618,356 people were newly housed, but in the same period the population increased by 2,922,654.

"Last year, for the third successive year, new residential building

## 'Guarantee Plans' Aids Sale of Used Boxes

GRAND RAPIDS, Mich.—Guaranteed satisfaction from used refrigerators or your money back. That is the policy of Jersey Refrigerator Co., Frigidaire dealer here, but so well are the trade-ins checked for defects that not one box has come back.

Trade-ins are sold on time at the rate of \$5 a month average payment. If the refrigerator fails to stand up mechanically or does not deliver adequate refrigeration, a \$2 refund is given. As the remaining \$3 is considered not exorbitant, in view of the fact that ice would cost more than that, the customer is assured of economical refrigeration every month.

The offer takes the place of a store guarantee, says W. R. Jersey, store owner, and assures the used refrigerator buyer that he is not buying a "jalopy." Should the unit fail during the month, it is repaired at once, and the pledge of mechanical efficiency continues.

To guard against used refrigerator troubles, the store has two service men who completely recondition all trade-ins. Mechanical parts, finish, and fixtures are checked and rechecked before the used refrigerator is put on the floor for re-sale under the guarantee.

## SHARPSHOOTERS

(1) Methyl Chloride (2) Sulphur Dioxide (3) Ammonia  
Good sense says: "take to cover" when these enemies of the serviceman's eyes, nose, throat and lungs go sniping—for they never miss.  
The outfit illustrated is easy to buy (inexpensive); easy to carry (light); easy to use (comfortable). Comes all set with cartridges for the three sharpshooters. See at your jobber's, or order direct today—only \$12.85. Will pay out the first time used.

CHICAGO EYE SHIELD CO. 2352 WARREN BLVD. CHICAGO, ILLINOIS

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for Commercial Use

Mills Novelty Company • 4100 Fullerton Avenue • Chicago, Illinois

**HENRY**  
ABSO-DRY  
Pressure Sealed  
DEHYDRATION  
STRAINER  
TYPE 732  
Hear 'Em Hiss-s-s-s!  
A new combination dryer and strainer. Dehydrant is confined in a felt sack inside a fine mesh brass screen, therefore particles cannot escape into system. Soldered brass shell with dispersion tube. Vacuum dried and pressure sealed. Choice of 5 dehydrants.

Write for catalog HENRY VALVE CO. 1001-19 N. PAULING AVE. CHICAGO, ILLINOIS  
STOCKED BY LEADING JOBBERS

**Chieftain**  
FIELD DEMAND for HIGH CAPACITY and RUGGEDNESS + TECUMSEH ENGINEERING & PRECISION = NEW HEAVY DUTY COMMERCIAL UNITS  
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Canadian distributor: Refrigeration Supplies Co., Ltd., London, Ontario

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Write for your copy  
Wholesale only—use your letterhead

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DOMESTIC REFRIGERATORS  
COMMERCIAL REFRIGERATION  
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1939  
The HARRY ALTER CO., INC.

## CLASSIFIED ADVERTISING

RATES: Fifty words or less in 6-point light-face type only, one insertion, \$2.00, additional words, four cents each. Three consecutive insertions \$5.00, additional words ten cents each.

PAYMENT in advance is required for advertising in this column.

REPLIES to advertisements with Box No. should be addressed to Air Conditioning & Refrigeration News, 5229 Cass Ave., Detroit, Mich.

## POSITIONS WANTED

SEASONED EXECUTIVE. At present manager with one of the large distributors handling commercial refrigeration and air conditioning and allied appliances. Desires to associate with manufacturer or distributor. Age 40, America, college education. Traveled extensively. Twenty years' experience in sales, advertising and merchandising work. Can be available 2-3 weeks' notice. Compensation based on results. Ready to assume heavy responsibilities, etc. Box 1160, Air Conditioning & Refrigeration News.

EXECUTIVE SALES Organizer. Eighteen years' experience in merchandising domestic and commercial refrigeration, central plant and unit air conditioning, automatic heating, washing machines and appliances through distributors, dealers and large direct sales organizations for country's top flight manufacturers and merchandisers. Has outstanding record as profitable producer and sales organizer. Is an authority on department store and distributor appliance merchandising. Would make excellent sales manager, branch or division manager for some wide awake manufacturer where a sales producing, good business man is needed. Box 1162, Air Conditioning & Refrigeration News.

INDUSTRIAL DESIGNER (automatic control engineering), research, development, application and sales, is desirous of connecting with small growing company where efforts are appreciated and a chance for a future. Can take a program through from conception to manufacture and sales, make all drawings, models, run all tests and rate instruments, plan and supervise production. Have recently designed and own a series of magnetic valves with extremely high operating differentials but with from twenty-five to forty thousandths piston clearances, run tests to one million without one single failure on steam, water, air. This valve is distinctly different and novel, has oceans of sales points. These valves will make a fortune for whoever manufactures them. Past connections include Minneapolis-Honeywell, Warren Webster, Alco Valve, Fred Pfening, etc. Ask for full packet of facsimile reference letters without delay. Address RAY C. MOORE, 48 Renner St., Delaware, Ohio.

## POSITIONS AVAILABLE

COMMERCIAL REFRIGERATION sales managers wanted for positions with Carrier refrigeration distributors in various parts of the country. Attractive salary and bonus arrangement. Reply to Box 1161, Air Conditioning & Refrigeration News, with full details of your experience.

## FRANCHISES AVAILABLE

COMMERCIAL LINE refrigerator display cases, walk-in coolers, and refrigerators; also direct draw, mechanically-cooled beer coolers. Sell with Ehrlich compressors or with any other make. Attractive

discounts, also financing arrangements to help sell. 70 years in business. Write for full information. EHRLICH REFRIGERATOR MFG. CO., St. Joseph, Mo.

COMMERCIAL REFRIGERATION dealers and direct salesmen—We manufacture meat cases, market coolers, vegetable cases, bakery cases, show cases, etc. Our products compare in appearance and specifications with very best lines, yet prices compete with lowest. We finance your refrigeration sales, including your compressor. Write—MORTON SHOW CASES, INC., Washington Court House, Ohio.

## EQUIPMENT WANTED

HOUSEHOLD OR commercial refrigerators wanted; new or late model trade-ins, also quantity of ice cube trays, drip pans and surplus stock of refrigeration equipment. Quote quantity and lowest prices. AUDUBON, 2130 Amsterdam Avenue, New York City.

## EQUIPMENT FOR SALE

GRUNOW PARTS—R & S PARTS COMPANY opens field to independent service men and former Grunow dealers. Purchase your Grunow parts direct. At reasonable prices. Refrigerant CH<sub>2</sub>-CL<sub>2</sub>, gallon—\$4.00, compressors exchange—\$11.00, Carrene meters exchange—\$3.00, compressor oil per gallon—\$1.75. Many other items not listed. 3577 Fourteenth Street, Detroit, Michigan.

## REPAIR SERVICE

MAJESTIC, GRUNOW, General Electric and Westinghouse rebuilding. World's largest rebuilders. Prices \$30.00 with 18 months' guaranty. Parts for Majestics and Grunows. GE floats \$2.95. Westinghouse flapper valves \$1.00. 1/4 H.P. Majestic capacitor motors \$3.75. Write for catalog. G & G GENUINE MAJESTIC REFRIGERATOR AND RADIO PARTS SERVICE, 5801 Dickens, Chicago.

G.E. and Westinghouse hermetic units rebuilt with factory equipment. G.E. DR1-DR2—\$30.00; Westinghouse \$27.50; one year guarantee, prices on other models on request. Deal with the original hermetic unit rebuilders—REX REFRIGERATION SERVICE, INC., 2226 S. State St., Chicago, Ill.

CONTROL REPAIR service. Your controls repaired by expert mechanics, with special precision equipment. Supervised by graduate engineers. We stress perfection and dependability before price. One year guarantee on domestic controls. Any bellows operated device repaired. HALELECTRIC LABORATORY, 1793 Lakeview Road, Cleveland, Ohio.

DOMESTIC CONTROLS repaired: Ranco pencil \$1.75, Ranco box \$2.00, General Electric \$2.00, Tag \$2.00, Cutler-Hammer \$2.00, Penn \$2.00, Bishop Babcock \$2.50, Majestic \$2.50, Penn magnetic \$2.50, G. E. Frigidaire \$2.50. In business over 20 years. Our name is our guarantee. UNITED SPEEDOMETER REPAIR CO., INC., 342 West 70th Street, New York City.

## PATENTS

HAVE YOUR patent work done by a specialist. I have had more than 25 years' experience in refrigeration engineering. Prompt searches and reports. Reasonable fees. H. R. VAN DEVENTER (ASRE), Patent Attorney, 342 Madison Avenue, New York City.



## WAGES

Average Annual Wage per Employee  
(Four year average 1935-38)

\$1382.00

Comparison of  
Universal Cooler's  
Wages, Taxes &  
Dividends (Per  
Employee) Over  
4-Year Period  
1935-6-7-8

## TAXES

Average  
Taxes per  
Employee

\$429.00

## DIVIDENDS

\$72.00

McNeal Shows How Big  
A Bite Taxes Take

(Concluded from Page 1, Column 1)  
employee for the four years averaged  
\$429 a year per employee.

Amount of money paid to stockholders of Universal Cooler Corp. during the four years totaled \$112,111.10, very much less than the sum paid for either wages or taxes. This is demonstrated graphically in the bar chart which gives the amount paid per year per employee for wages (\$1382); taxes (\$429); and dividends (\$72).

The following tabulation shows the amount paid out by Universal Cooler Corp. for wages and taxes in the years 1935, 1936, 1937, and 1938. Note that in 1936, the year in which the New Deal tax-and-spend program was getting into high gear, the amount paid for taxes totaled \$266,000, while the amount paid out in wages was \$482,000, taxes paid thus being approximately 55% of wages.

1935	
Total Wages	\$603,000
Taxes Paid	\$74,000
1936	
Total Wages	\$482,000
Taxes Paid	\$266,000
1937	
Total Wages	\$594,000
Taxes Paid	\$173,000
1938	
Total Wages	\$450,000
Taxes Paid	\$123,000

Seyern Heads Appliance  
Sales of Chicago Utility

CHICAGO—George K. Seyern, formerly supervisor of residential major appliances, has been named assistant to the manager of merchandise sales of Commonwealth Edison Co., in charge of merchandise selection and control of home laundry equipment, radio, and refrigeration.

E. K. Christian is the new sales manager of the Main Electric shop.

Westinghouse Advances  
Cosgrove & Newcomb

(Concluded from Page 1, Column 2)

Announcement of the appointments were made by Frank R. Kohnstamm, sales manager of the merchandising division.

Mr. Cosgrove, whose entire 20-year business career has been with Westinghouse, is a native of Connecticut and was graduated from Carnegie Institute of Technology at Pittsburgh in 1918. He served in France during the World War as a lieutenant of engineers in the eighty-fourth Division.

Joining the Westinghouse company in East Pittsburgh on his discharge from the army, he became successively manager of the farming section, the farm lighting plant activities, rural distribution, sales promotion and education, and finally the refrigeration department.

Mr. Newcomb, a native of Vermont, worked as a wholesale drug salesman, and in 1925 joined the Fibroid Corp., becoming assistant sales manager one year later. He was later with the Magazine Repeating Razor Co. and the Holmes Refrigerator Co.

In 1929 Mr. Newcomb was appointed household refrigeration supervisor at the Mansfield Westinghouse plant. He was made coordinator of refrigerator design and product development at the East Springfield plant in 1933, and in 1935 returned to Mansfield as manager of commercial refrigeration.

Block's Opens New Store  
In Indianapolis

INDIANAPOLIS—Block's North Side Appliance Store opened here recently, retailing major electrical appliances, phonographs, and gas refrigerators. C. F. Graham is manager.

THE COLD  
CANVASS

By B. T. Umore

## Unwelcome Gas

H. V. Beggs, sales engineer for Heberlee Ice Machine Co., Detroit, came in the other day with another story about the foibles of using well water for summer air conditioning. Latest difficulty to crop up and plague Mr. Beggs is a theater at St. Clair Shores, Mich., where the well-water pump is delivering natural gas a good portion of the time.

Any fine summer evening patrons of the theater may hear the pump start to chatter, indicating that the flow of water has stopped and that gas is flowing into the lines. It is then necessary to "bleed" the gas out of the lines before the pump can get another head of water. Mr. Beggs is currently trying to find a way to "bleed" gas out of the lines automatically in order to keep the system in satisfactory operation.

Old B. T. U. suggested hooking the gas up to a natural gas engine, and getting some good out of it.

## Hitching Post Stores

Back where we wuz brung up, most of the communities had one real store, the "general" store, which was also the post office, the Town Hall, and site of the non-stop horse-

shoe pitching and checker tournaments.

There generally was a row of hitching posts out in front.

Then as time went on, the country seemed to get away from that idea. Merchants became specialists. The drug stores, with their sandwich counters, their photo finishing, their garden seed, and stamps, came nearest to the old idea of a store.

Now, however, we sense a trend toward spreading out on the part of grocery stores. Some of them are selling toothbrushes and dentifrices; you see razor blades and cosmetics; Krogers even sell vitamin capsules.

And, to cap the climax, Stewart-Warner's progressive John Ditzell is now selling his two-temperature household refrigerators through grocery stores which feature quick-frozen foods.

## Mighty Midgets

Now that Crosley has announced a tiny auto, followed by the entrance into the pocket camera field, we will hardly be surprised if someone reaches into his vest during a hot afternoon and takes a cool drink from a minute electric refrigerator tucked away on his person.

## Ice Cream Socials

Lewis Eastmead, Servel sales promotion representative in Texas and Oklahoma, likes the company's "ice cream social" plan for marketing refrigerators in rural districts.

After ferreting out the most important farmer in a district, Mr.

Eastmead asks permission to put an Electrolux box on display in his home for one evening.

Neighbors from miles around are invited for ice cream and cake, and later in the evening a slide-film about the Electrolux refrigerator is shown at the "social."

No attempt is made to get orders at this social gathering, but Mr. Eastmead reports that the home where the festivities are held seldom fails to keep the box.

## Giving His All

During electrical appliance week in Knoxville, every man, woman, and child was urged to "use electricity."

So fine was the cooperation that a prisoner in the "pen" down there was reported as saying—"You can count on me to do my bit!—I'm going to the 'hot seat' Wednesday."

The big electrical appliance campaign even inspired a poem by L. W. Miller, writing in his "Sunshine and Moonshine" column in the News-Sentinel.

With every volt  
There comes a jolt,  
But needn't fear the ampere—  
It's ohm, sweet ohm—  
No fuses blown,  
Each gadget makes you happier.

## Five Cents Apiece

Regarding economic trends, the Los Angeles Times observes that some of the best books on how to cure the depression are now on sale in second-hand bookshops at five cents per copy.



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## Practically free of SERVICE

(From one of many letters in our Jobber  
and Service Men Correspondence File)

Is it any wonder that  
A-P Valves are "Favorites"  
with Service Engineer and Jobber?  
This "Freedom from Service"  
gives the Service Engineer more time  
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more work — make more Profit — and keep his  
customers better satisfied!

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Who Recognize Quality, Stock  
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**DEPENDABLE**

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A-P Valves are supersensitive,  
leakproof, simple in construction  
and operation — precision built to give you  
Dependable Performance that makes  
Refrigeration and Air Conditioning Service  
a pleasure. Ask your Jobber about them.

There's an A-P Thermostatic  
Expansion Valve and Solenoid for every size  
and type of Installation.



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